

CORRECTIONS MADE :
STATION POSITIONS #5

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5403

(MLR 58)

3 March - 5 April 1954

and

CCOFI CRUISE 5404

(MLR 59)

7 April - 13 May 1954

SIO Reference 58-65

15 September 1958

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5403
(MLR 58)
3 March - 5 April 1954

and

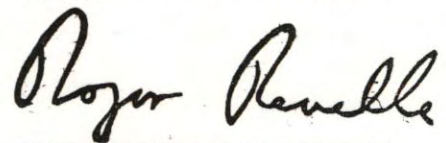
CCOFI CRUISE 5404
(MLR 59)
7 April - 13 May 1954

Sponsored by

Marine Research Committee

SIO Reference 58-65
15 September 1958

Approved for distribution:



Roger Revelle, Director

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INTRODUCTION

The data in this report were collected on the fifty-eighth and the fifty-ninth consecutive cruises of the California Cooperative Oceanic Fisheries Investigations program. The R/V N. B. Scofield of the California Department of Fish and Game and the R/V Crest and R/V Horizon of the Scripps Institution of Oceanography participated in the fifty-eighth cruise while the R/V Crest, the R/V E. W. Scripps, the R/V Horizon and the R/V Spencer F. Baird of the Scripps Institution participated in the fifty-ninth cruise.

The data are tabulated at observed depths; the interpolated and computed values are tabulated at standard depths accompanied by charts of horizontal distribution. The presentation of data in this report does not constitute publication, and the interpretations herein may be subject to modification as the program continues.

STANDARD PROCEDURES

To indicate degree of accuracy, temperatures are recorded in tenths of a degree when obtained by bucket thermometer, thermograph, or bathythermograph, while temperatures from reversing thermometers are recorded in hundredths of a degree. Extrapolated values and values interpolated between remote observations are entered within parentheses. A hyphen is used to indicate a missing observed value. The time is the time of messenger release. When more than one cast was made on a station, each messenger time and wire angle is given in the order of increasing depth of casts. A line is left blank between the observed data of each cast.

FOOTNOTES

In addition to standard footnotes, three special notations are used without footnotes because their meaning is always the same.

To indicate a premature or a delayed reversal of the water-sampling device which results in certain depth and property errors, the following notation is used.

p: pretrip or posttrip.

Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

r: rejected value (value seems to be definitely wrong),

u: uncertain value (value may be correct; occasionally it can influence the drawing of the property curve).

FORMAT

These data are typed in the format of the University of California Press publication, "Oceanic Observations of the Pacific." So that these pages can be used as copy for the 1954 volume, the first page of the Cruise 5403 data is numbered 58 and the first page of 5404 is numbered 90.

FIGURES

1. CCOFI Cruise 5403 (MLR 58), station positions
2. Horizontal distribution of dynamic height anomaly (0 over 500 d-bar)
3. Horizontal distribution of temperature at 10 meters
4. Horizontal distribution of salinity at 10 meters
5. Horizontal distribution of temperature at 200 meters
6. Horizontal distribution of salinity at 200 meters

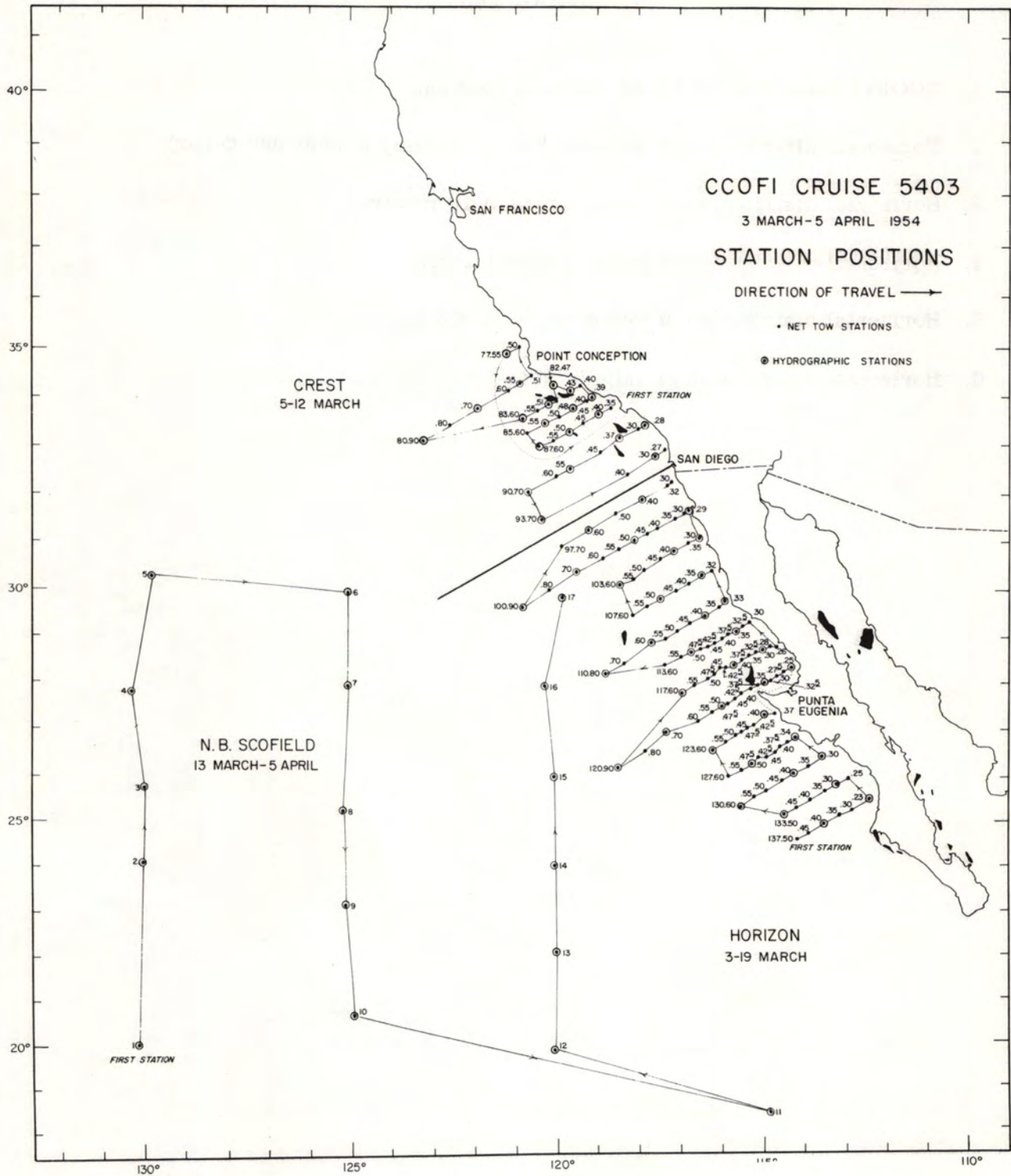


FIGURE 1

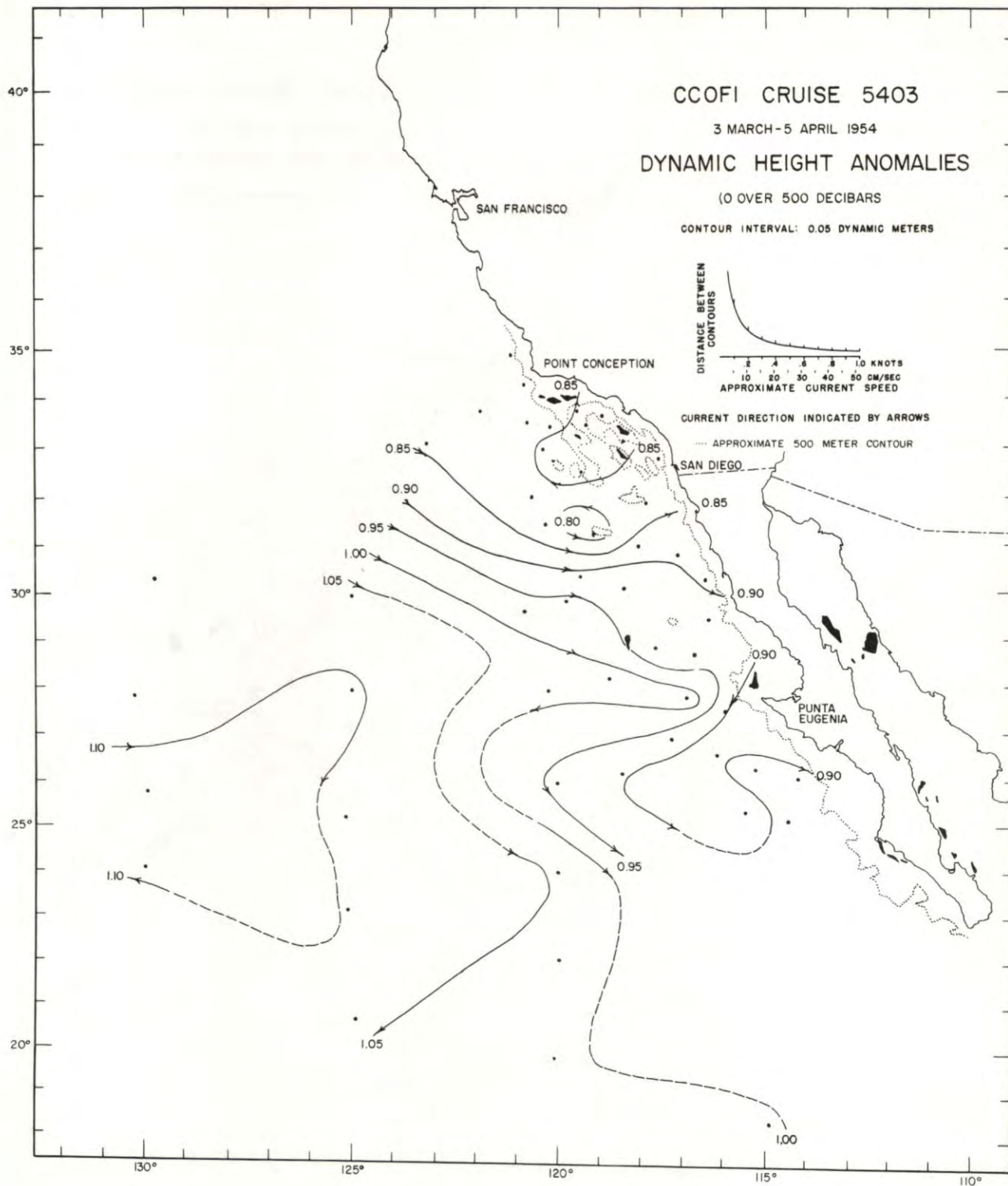


FIGURE 2

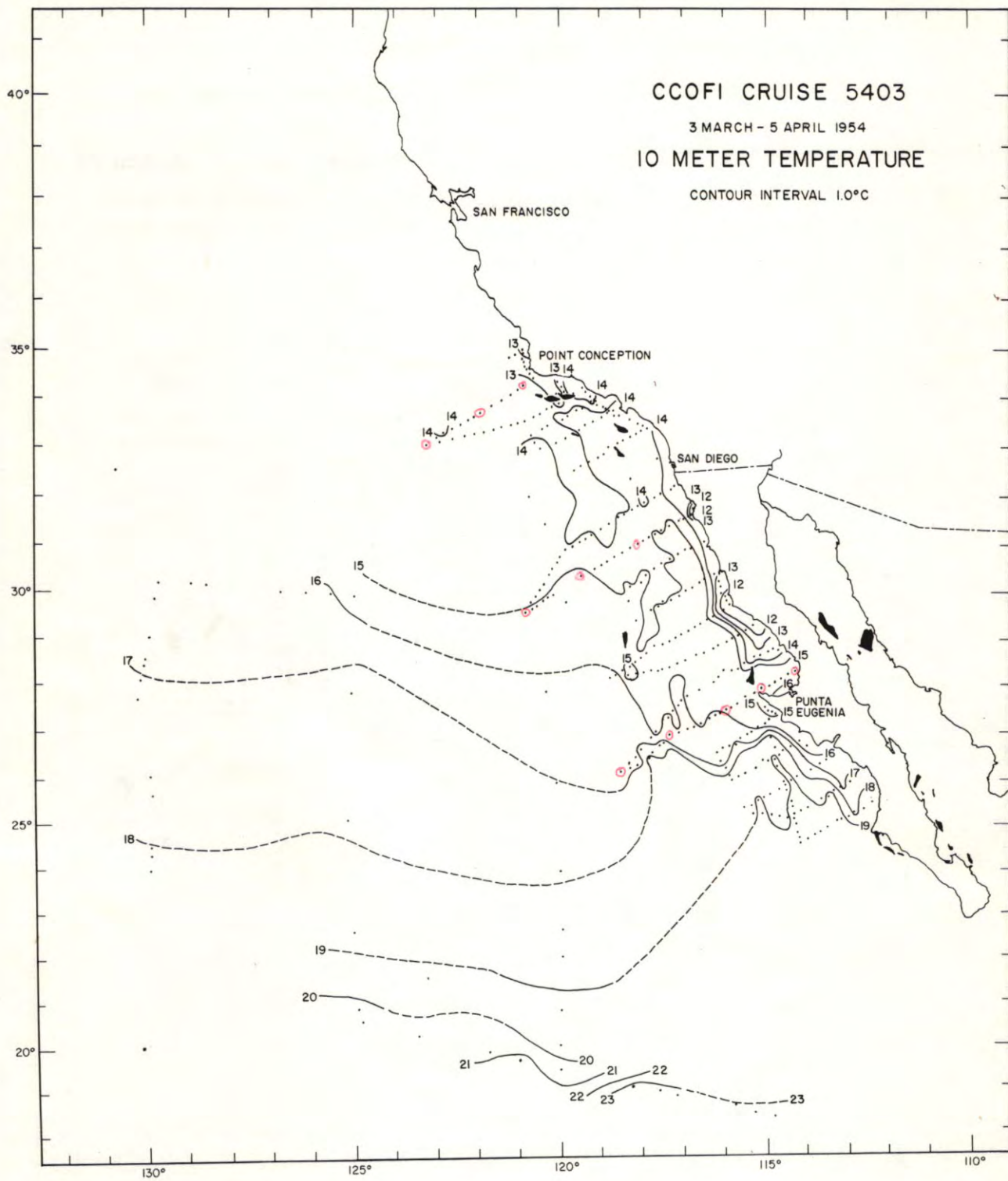


FIGURE 3

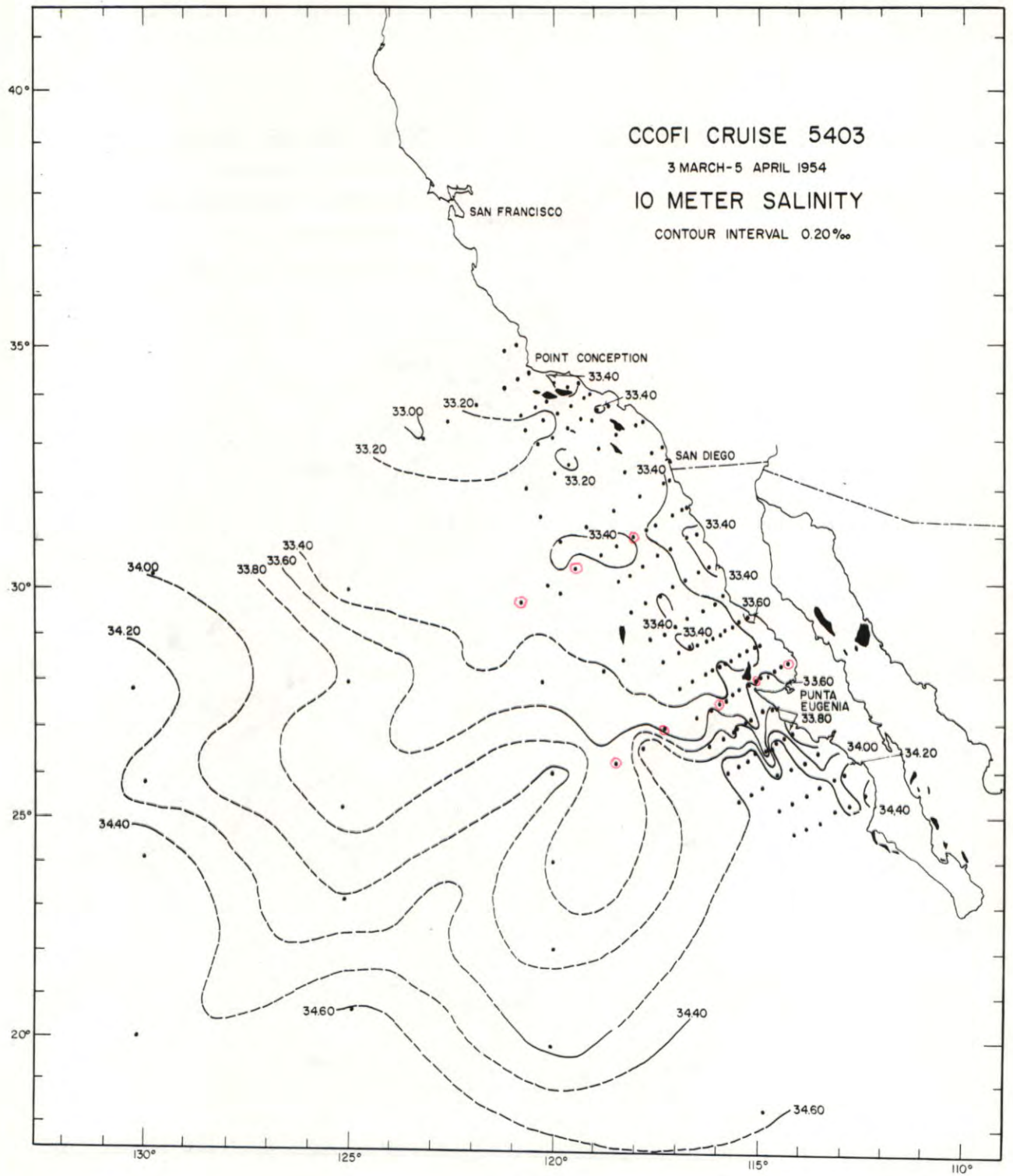


FIGURE 4

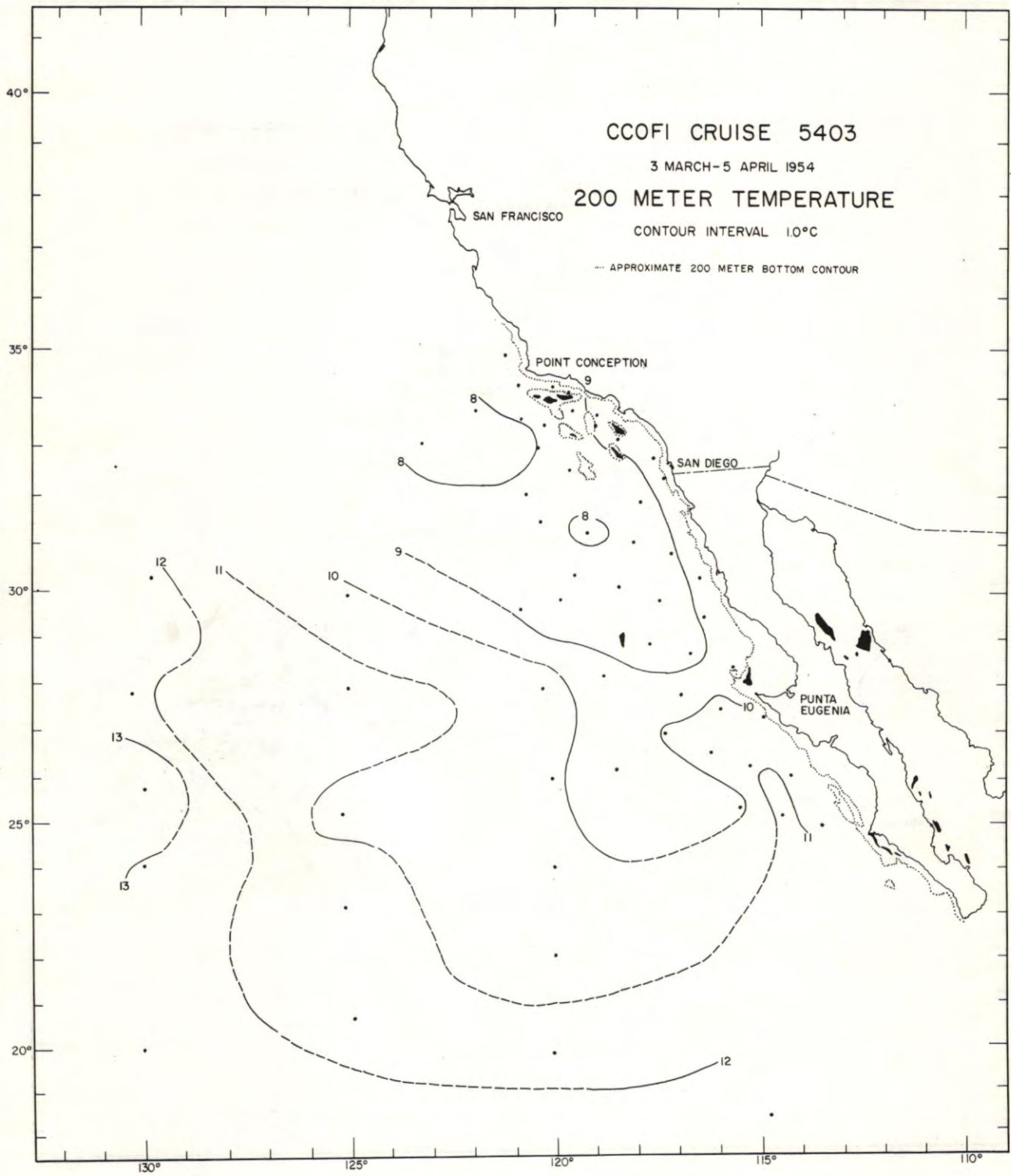


FIGURE 5

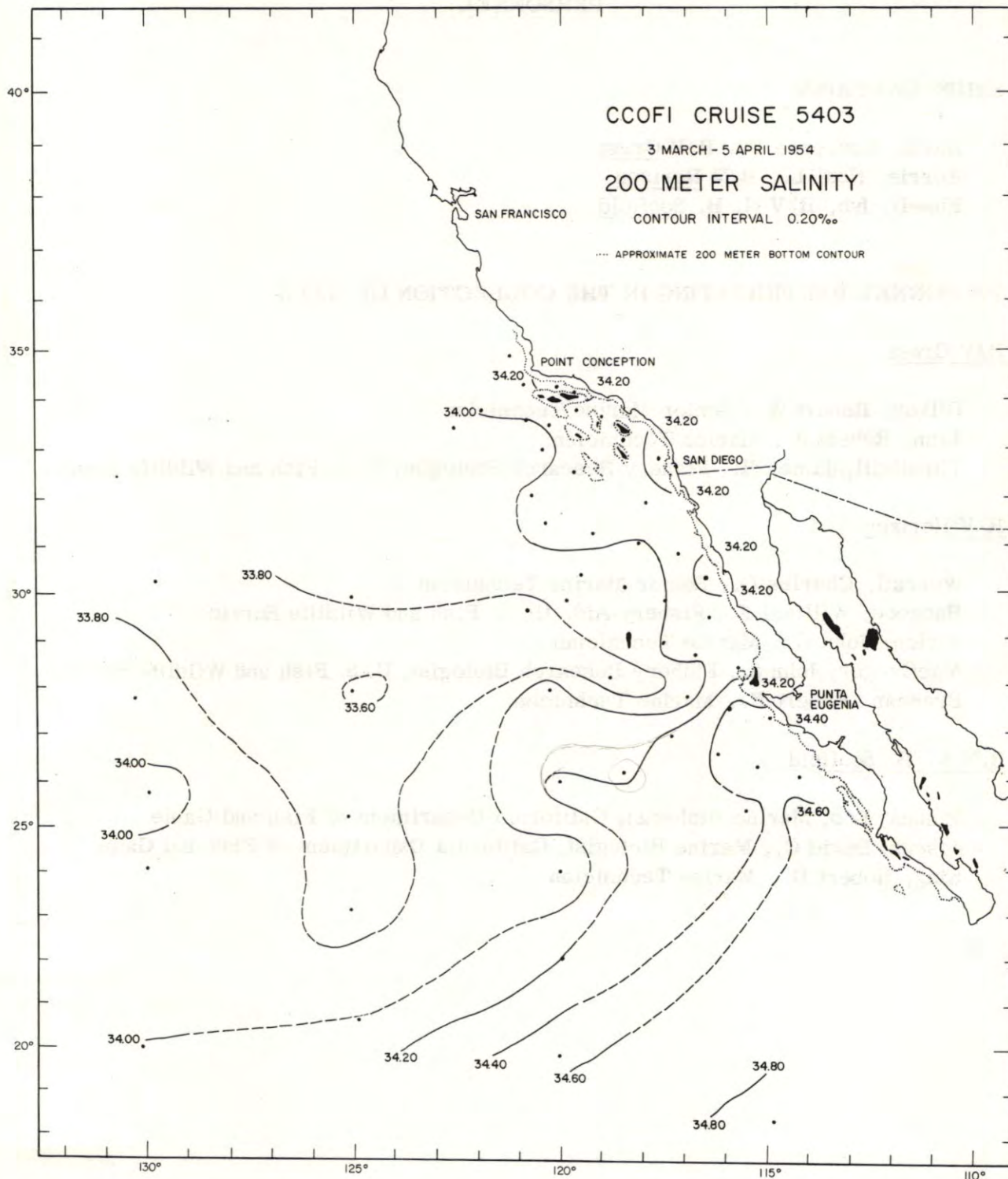


FIGURE 6

CRUISE 5403
PERSONNEL

SHIPS' CAPTAINS

Davis, Laurence E., R/V Crest
Ferris, Noel L., R/V Horizon
Kuselj, Ivo, R/V N. B. Scofield

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Crest

Gilkey, Robert W., Senior Marine Technician
Linn, Robert J., Marine Technician
Thraikill, James R., Fishery Research Biologist, U. S. Fish and Wildlife Service

R/V Horizon

Worrall, Charles G., Senior Marine Technician
Hapgood, William F., Fishery Aid, U. S. Fish and Wildlife Service
Kivlen, John C., Marine Technician
MacGregor, John S., Fishery Research Biologist, U. S. Fish and Wildlife Service
Brennan, Robert E., Marine Technician

R/V N. B. Scofield

Pinkas, Leo, Marine Biologist, California Department of Fish and Game
Joseph, David C., Marine Biologist, California Department of Fish and Game
King, Robert D., Marine Technician

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

77.55

CREST; March 9, 1954; 2048 GCT; 34°54.5'N, 121°10.5'W; sounding, 325 fm; wind, 270°, force 2; weather, fog; sea, rough; wire angle, 12°.

0	14.6	33.36		0	14.6	33.36		24.81	315	0.00
10	12.66	33.37		10	12.66	33.37		25.22	276	0.03
30	12.44	33.35		20	12.51	33.36		25.24	274	0.06
40	12.23	33.38		30	12.44	33.35		25.25	273	0.08
50	11.22	33.49		50	11.22	33.49		25.58	242	0.14
60	10.67	33.51		75	10.03	33.50		25.80	221	0.19
70	10.26	33.49		100	9.54	33.69		26.03	199	0.25
79	9.91	33.51		150	9.10	33.97		26.32	171	0.34
89	9.78	33.64		200	8.64	34.11		26.50	154	0.42
99	9.55	33.69		250	8.15	34.20		26.64	141	0.50
119	9.35	33.80		300	7.75	34.23		26.73	132	0.57
143	9.15	33.96		400	7.01	34.26		26.86	120	0.70
163	9.00	33.97		500	6.14	34.31		27.01	106	0.82
201	8.62	34.11								
279	7.91	34.22								
382	7.16	34.25								
504	6.09	34.31								

78.185

N. B. SCOFIELD; March 18, 1954; 1820 GCT; 30°22'N, 129°45'W; sounding, 2000 fm; wind, 050°, force 1; weather, overcast; sea, moderate; wire angle, 08°.

0	16.62	33.93	5.53	0	16.62	33.93	5.53	24.80	316	0.00
10	16.64	33.97	5.54	10	16.64	33.97	5.54	24.83	313	0.03
31	16.68	33.96	5.60	20	16.64	33.96	5.58	24.82	314	0.06
62	16.98	34.26	5.61	30	16.67	33.96	5.60	24.81	315	0.09
93	16.96	34.06	5.65	50	16.89	34.18	5.62	24.93	303	0.16
114	17.18	34.14	5.68	75	16.97	34.16	5.63	24.90	306	0.23
134	17.85	34.41	5.35	100	16.97	34.07	5.66	24.83	313	0.31
144	16.89	34.29	5.51	150	16.55	34.28	5.48	25.09	288	0.46
154	16.29	34.27	5.35	200	12.40	33.76	5.28	25.57	242	0.60
179	14.08	33.84	5.47	250	10.02	33.79	4.73	26.02	200	0.71
204	12.10	33.76	5.18	300	8.63	33.94	4.46	26.37	166	0.80
263	9.58	33.81	4.64	400	6.77	33.98	3.10	26.67	138	0.96
332	7.90	34.00	4.25	500	5.61	34.04	1.59	26.86	120	1.10
417	6.54	33.98	2.76	600	4.94	34.16	0.74	27.04	103	1.22
522	5.45	34.07	1.34	700	4.53	34.27	0.53	27.17	91	1.32
652	4.69	34.22	0.55	800	4.23	34.39	0.52	27.30	78	1.41
825	4.17	34.42	0.51	1000	3.70	34.55	1.03	27.48	61	1.57
1013	3.67	34.55	1.11							

80.55

CREST; March 9, 1954; 1158 GCT; 34°20'N, 120°48.5'W; sounding, 420 fm; wind, 200°, force 2; weather, drizzle; sea, slight; wire angle, 06°.

0	13.8	33.28		0	13.8	33.28		24.92	304	0.00
10	13.47	33.33		10	13.47	33.33		25.03	294	0.03
31	12.86	33.30		20	13.16	33.32		25.08	289	0.06
41	11.32	33.27		30	12.91	33.30		25.12	285	0.09
52	10.66	33.30		50	10.76	33.29		25.51	248	0.14
80	9.60	33.49		75	9.75	33.45		25.81	220	0.20
109	9.02	33.78		100	9.14	33.70		26.10	192	0.25
232	8.45	34.20		150	8.84	34.01		26.39	164	0.34
342	7.57	34.24		200	8.64	34.16		26.54	150	0.42
486	6.59	34.25		250	8.31	34.21		26.63	142	0.50
611	5.78	34.33		300	7.88	34.23		26.71	134	0.57
				400	7.15	34.25		26.83	123	0.70
				500	6.47	34.26		26.93	113	0.83
				600	5.80	34.32		27.06	101	0.94

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10 ⁵ cm ³ /g	dyn. m

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CREST; March 9, 1954; 0458 GCT; 33°49'N, 121°51'W; sounding, 2020 fm; wind, 170°, force 3;
weather, overcast; sea, moderate; wire angle, 04°.

80.70

0	14.19	33.24		0	14.19	33.24		24.81	315	0.00
10	13.15	33.23		10	13.15	33.23		25.01	296	0.03
26	12.76	33.31		20	12.88	33.28		25.11	286	0.06
57	10.49	33.37		30	12.59	33.32		25.19	279	0.09
67	10.10	33.42		50	10.90	33.36		25.54	245	0.14
77	9.79	33.44		75	9.84	33.44		25.78	222	0.20
91	9.39	33.49		100	9.21	33.62		26.03	199	0.25
112	9.04	33.74		150	8.57	33.87		26.32	171	0.35
136	8.78	33.82		200	7.96	34.01		26.52	152	0.43
167	8.33	33.94		250	7.46	34.07		26.64	141	0.50
221	7.74	34.04		300	7.05	34.13		26.75	130	0.57
301	7.04	34.13		400	6.49	34.28		26.94	112	0.70
409	6.44	34.29		500	5.92	34.32		27.05	102	0.81
555	5.62	34.33		600	5.39	34.34		27.13	94	0.92
749	4.69	34.40		700	4.90	34.38		27.22	86	1.02
992	3.90	34.49		800	4.50	34.42		27.29	79	1.11
1310	3.18	34.52		1000	3.87	34.49		27.42	67	1.27

CREST; March 8, 1954; 2021 GCT; 33°09.5'N, 123°12'W; sounding, 2350 fm; wind, 200°, force 3;
weather, overcast; sea, moderate; wire angle, 15°.

80.90

0	14.8	32.97		0	14.8	32.97		24.47	347	0.00
10	13.17	33.00		10	13.17	33.00		24.83	313	0.03
25	12.72	33.02		20	12.80	33.01		24.91	305	0.06
50	12.24	33.28		30	12.61	33.06		24.99	298	0.09
60	12.24	33.33		50	12.24	33.28		25.23	275	0.15
71	12.06	33.31		75	11.91	33.32		25.32	266	0.22
80	11.58	33.33		100	9.58	33.36		25.76	224	0.28
99	9.60	33.36		150	8.53	33.85		26.31	172	0.38
123	9.29	33.69		200	7.48	33.96		26.55	149	0.46
152	8.50	33.85		250	7.40	34.10		26.68	137	0.54
201	7.48	33.96		300	6.98	34.13		26.76	129	0.60
267	7.35	34.12		400	6.06	34.15		26.90	116	0.73
370	6.24	34.13		500	5.55	34.29		27.07	100	0.85
493	5.60	34.29		600	4.91	34.30		27.15	92	0.95
669	4.60	34.31		700	4.51	34.32		27.21	87	1.05
889	3.98	34.45		800	4.21	34.38		27.29	79	1.14
1195	3.25	34.51		1000	3.70	34.48		27.43	66	1.30

CREST; March 7, 1954; 2058 GCT; 34°16'N, 119°58'W; sounding, 315 fm; wind, 300°, force 2;
weather, cloudy; sea, moderate; wire angle, 04°.

82.47

0	14.5	33.43		0	14.5	33.43		24.89	307	0.00
10	13.18	33.40		10	13.18	33.40		25.14	283	0.03
31	11.54	33.44		20	12.17	33.41		25.34	264	0.06
41	11.34	33.53		30	11.59	33.44		25.48	251	0.08
51	11.02	33.60		50	11.06	33.60		25.70	230	0.13
62	10.72	33.58		75	10.21	33.73		25.95	206	0.19
71	10.30	33.63		100	9.68	33.76		26.06	196	0.24
81	10.12	33.80		150	9.33	34.05		26.34	169	0.33
91	9.95	33.75		200	8.82	34.34		26.65	140	0.41
102	9.62	33.77		250	8.36	34.23		26.64	141	0.48
122	9.38	33.91		300	7.91	34.18		26.66	139	0.55
145	9.35	34.04		400	7.12					
166	9.24	34.07		500	6.53					
205	8.75	34.34								
285	8.06	34.18								
389	7.21	34.20								
511	6.48	-								

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

8343

CREST; March 7, 1954; 1903 GCT; 34°09'N, 119°35'W; sounding, 140 fm; wind, calm; weather, cloudy; sea, smooth; wire angle, 00°.

0	14.38	33.44		0	14.38	33.44		24.92	304	0.00
11	14.08	33.46		10	14.11	33.46		25.00	297	0.03
16	14.06	33.49		20	14.07	33.46		25.00	297	0.06
21	14.07	33.45		30	13.97	33.44		25.01	296	0.09
26	14.08	33.46		50	12.85	33.47		25.26	272	0.15
31	13.94	33.44		75	11.00	33.59		25.70	230	0.21
37	13.70	33.46		100	9.92	33.81		26.06	196	0.26
47	13.15	33.46		150	9.28	34.12		26.40	164	0.35
57	12.06	33.53		200	8.81	34.24		26.57	148	0.43
67	11.37	33.55								
78	10.84	33.62								
97	9.98	33.78								
112	9.78	33.98								
142	9.37	34.13								
172	9.09	34.09								
207	8.77	34.29								

8351

CREST; March 8, 1954; 0325 GCT; 33°52'N, 120°08.5'W; sounding, 105 fm; wind, 300°, force 4; weather, clear; sea, smooth; wire angle, 05°.

0	13.96	33.37		0	13.96	33.37		24.96	300	0.00
10	13.94	33.35		10	13.94	33.35		24.95	301	0.03
15	13.42	33.39		20	12.72	33.37		25.21	277	0.06
21	12.60	33.37		30	12.09	33.41		25.36	262	0.09
26	12.18	33.42		50	10.50	33.58		25.78	222	0.14
31	12.04	33.41		75	9.91	33.78		26.04	198	0.19
36	11.50	33.42		100	9.35	33.92		26.24	179	0.24
47	10.58	33.56								
57	10.39	33.62								
67	10.12	33.68								
81	9.76	33.84								
101	9.32	33.92								

8360

CREST; March 8, 1954; 0829 GCT; 33°34'N, 120°46'W; sounding, 950 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 04°.

0	14.0	33.22		0	14.0	33.22		24.83	313	0.00
10	13.49	33.22		10	13.49	33.22		24.94	302	0.03
30	13.34	33.28		20	13.40	33.25		24.98	299	0.06
46	13.16	33.51		30	13.34	33.28		25.01	296	0.09
56	13.09	33.37		50	13.13	33.49		25.22	276	0.15
66	12.56	33.29		75	11.51	33.30		25.38	260	0.22
76	11.40	33.30		100	9.93	33.57		25.87	214	0.28
87	10.28	33.42		150	8.70	33.88		26.31	172	0.37
102	9.88	33.57		200	8.09	33.99		26.49	155	0.46
112	9.41	33.51		250	7.60	34.06		26.62	143	0.53
137	8.92	33.79		300	7.15	34.13		26.73	132	0.60
166	8.50	33.93		400	6.28	34.22		26.92	114	0.73
221	7.87	34.02		500	5.85	34.29		27.03	104	0.85
286	7.30	34.11		600	5.46	34.37		27.14	93	0.95
401	6.28	34.22								
533	5.72	34.31								
671	5.18	34.43								

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{ cm}^3/\text{g}$	dyn. m

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CREST; March 7, 1954; 1343 GCT; 34°00'N, 119°04'W; sounding, 190 fm; wind, 180°, force 1; weather, missing; sea, smooth; wire angle, 01°.

8539

0	13.90	33.30		0	13.90	33.30		24.92	304	0.00
21	13.52	33.34		10	13.82	33.33		24.96	300	0.03
36	12.83	33.33		20	13.57	33.34		25.01	296	0.06
46	12.36	33.29		30	13.11	33.34		25.11	286	0.09
56	11.25	33.43		50	12.00	33.33		25.31	267	0.14
66	10.55	33.54		75	10.61	33.60		25.78	222	0.21
71	10.61	33.56		100	10.20	33.71		25.93	208	0.26
76	10.59	33.60								
81	10.50	33.60								
86	10.44	33.58								
91	10.34	33.67								
101	10.18	33.71								

CREST; March 7, 1954; 0926 GCT; 33°48'N, 119°31.5'W; sounding, 995 fm; wind, 290°, force 1; weather, clear; sea, calm; wire angle, 05°.

8545

0	14.18	33.31		0	14.18	33.31		24.87	309	0.00
10	14.20	33.31		10	14.20	33.31		24.86	310	0.03
31	13.48	33.30		20	13.99	33.30		24.90	306	0.06
41	12.52	33.32		30	13.53	33.30		24.99	298	0.09
52	11.50	33.35		50	11.63	33.35		25.40	259	0.15
62	11.00	33.37		75	10.58	33.43		25.65	235	0.21
72	10.62	33.41		100	10.26	33.65		25.88	213	0.27
81	10.50	33.49		150	9.48	33.92		26.22	181	0.37
92	10.30	33.68		200	8.88	34.08		26.44	160	0.45
102	10.23	33.65		250	8.30	34.15		26.58	146	0.53
127	9.68	33.83		300	7.79	34.18		26.68	137	0.60
156	9.41	33.94		400	6.99	34.29		26.88	118	0.74
206	8.80	34.09		500	6.37	34.42		27.07	100	0.85
265	8.16	34.16		600	5.67	34.37		27.12	95	0.96
369	7.20	34.24								
489	6.44	34.42								
616	5.56	34.36								

CREST; March 7, 1954; 0312 GCT; 33°30'N, 120°15'W; sounding, 680 fm; wind, 310°, force 5; weather, partly cloudy; sea, rough; wire angle, 18°.

8555

0	13.81	33.19		0	13.81	33.19		24.85	311	0.00
10	13.80	33.13		10	13.80	33.13		24.81	315	0.03
30	13.78	33.21		20	13.80	33.17		24.84	312	0.06
45	13.23	33.23		30	13.78	33.21		24.87	309	0.09
54	11.76	33.21		50	12.34	33.22		25.16	281	0.15
65	10.77	33.21		75	9.98	33.31		25.66	234	0.22
74	10.02	33.29		100	9.28	33.56		25.97	204	0.27
83	9.58	33.42		150	8.68	33.91		26.34	169	0.37
97	9.34	33.53		200	8.07	34.02		26.52	152	0.45
106	9.12	33.65		250	7.57	34.09		26.64	141	0.52
130	8.83	33.84		300	7.17	34.14		26.74	131	0.60
158	8.62	33.93		400	6.48	34.25		26.92	114	0.72
211	7.94	34.04		500	6.00	34.33		27.05	102	0.84
273	7.39	34.11		600	5.63					
385	6.56	34.24								
513	5.94	34.34								
648	5.48	34.22r								

S10

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5403

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

8740

CREST; March 6, 1954; 1005 GCT; 33°40'N, 118°58.5'W; sounding, 520 fm; wind, 320°, force 1; weather, overcast; sea, slight; wire angle, 02°.

0	14.54	33.39		0	14.54	33.39		24.85	311	0.00
10	14.29	33.40		10	14.29	33.40		24.91	305	0.03
31	12.89	33.40		20	13.60	33.40		25.05	292	0.06
41	12.18	33.47		30	12.96	33.40		25.18	280	0.09
52	11.54	33.48		50	11.63	33.48		25.50	249	0.14
63	11.22	-		75	10.81	33.52		25.68	232	0.20
73	10.86	33.51		100	10.44	33.68		25.87	214	0.26
82	10.65	33.59		150	9.80	33.90		26.15	187	0.36
92	10.50	33.67		200	9.15	34.11		26.42	162	0.45
102	10.41	33.68		250	8.49	34.19		26.58	146	0.53
127	10.04	33.84		300	7.93	34.24		26.71	134	0.60
157	9.72	33.92		400	7.09	34.30		26.88	118	0.73
207	9.07	34.13		500	6.41	34.36		27.02	105	0.85
267	8.28	34.21		600	5.79	34.52		27.22	86	0.96
372	7.28	34.28								
492	6.49	34.36								
619	5.68	34.54								

8750

CREST; March 6, 1954; 1542 GCT; 33°20'N, 119°39'W; sounding, 42 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.

0	13.46	33.48		0	13.46	33.48		25.14	283	0.00
11	13.22	33.37		10	13.25	33.37		25.10	287	0.03
21	13.10	33.38		20	13.10	33.38		25.14	283	0.06
31	12.99	33.40		30	13.00	33.40		25.17	280	0.08
41	12.76	33.40		50	11.92	33.47		25.44	255	0.14
51	11.89	33.48								
62	11.69	33.50								

8760

CREST; March 6, 1954; 2109 GCT; 33°02.5'N, 120°24'W; sounding, 510 fm; wind, 310°, force 4; weather, overcast; sea, moderate; wire angle, 06°.

0	14.36	33.19		0	14.36	33.19		24.74	321	0.00
10	14.35	33.22		10	14.35	33.22		24.76	320	0.03
31	14.35	33.22		20	14.37	33.22		24.76	320	0.06
47	14.30	33.22		30	14.37	33.22		24.76	320	0.10
58	13.42	33.17		50	14.29	33.21		24.77	319	0.16
67	12.29	33.14		75	11.19	33.10		25.28	270	0.23
76	11.10	33.10		100	9.52	33.42		25.82	219	0.30
87	10.54	33.22		150	8.71	33.78		26.23	180	0.40
102	9.48	33.44		200	8.11	33.96		26.46	158	0.48
111	9.37	33.49		250	7.59	34.03		26.59	146	0.56
136	8.92	33.64		300	7.07	34.11		26.73	132	0.63
167	8.50	33.91		400	6.22	34.16		26.88	118	0.76
220	7.90	33.98		500	5.73	34.30		27.06	101	0.88
285	7.23	34.10		600	5.32	34.35		27.14	93	0.98
399	6.23	34.16								
530	5.62	34.33								
667	5.08	34.35								

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

S10
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N. B. SCOFIELD; March 17, 1954; 1530 GCT; 27°55'N, 130°14'W; sounding, 2000 fm; wind, 020°, force 5; weather, overcast; sea, very rough; wire angle, 18°.

88.210

0	17.61	34.35	5.52	0	17.61	34.35	5.52	24.89	307	0.00
10	17.63	34.32	5.53	10	17.63	34.32	5.53	24.86	310	0.03
35	17.62	34.33	5.42	20	17.64	34.32	5.52	24.86	310	0.06
65	17.67	34.34	5.64	30	17.64	34.33	5.44	24.87	309	0.09
84	17.74	34.34	5.41	50	17.65	34.34	5.54	24.87	309	0.16
104	18.36	34.61	5.38	75	17.69	34.34	5.55	24.86	310	0.23
114	18.39	34.64	5.26	100	18.29	34.57	5.40	24.89	307	0.31
143	16.96	34.34	5.25	150	16.25	34.20	5.23	25.09	288	0.46
181	13.18	33.82	5.11	200	12.17	33.85	5.08	25.68	232	0.59
230	10.84	33.98	5.02	250	10.14	34.05	4.90	26.21	182	0.70
298	8.76	34.16	4.44	300	8.70	34.16	4.42	26.53	151	0.78
380	7.13	33.96	3.32	400	6.82	33.97	3.26	26.65	140	0.94
483	5.96	34.11	1.55	500	5.80	34.14	1.38	26.92	114	1.07
612	5.06	34.34	0.68	600	5.12	34.34	0.73	27.16	92	1.18
781	4.28	34.36	0.56	700	4.60	34.35	0.58	27.23	85	1.27
990	3.79	34.52	0.80	800	4.21	34.36	0.56	27.28	80	1.36
				1000	(3.77)	(34.53)	(0.80)	(27.46)	(63)	(1.52)

CREST; March 10, 1954; 1346 GCT; 33°28.5'N, 117°47'W; sounding, 74 fm; wind, 280°, force 2; weather, overcast; sea, smooth; wire angle, 00°.

90.28

0	14.30	33.30		0	14.30	33.30		24.83	313	0.00
10	14.29	33.30		10	14.29	33.30		24.83	313	0.03
16	13.92	33.29		20	13.30	33.30		25.04	293	0.06
21	13.12	33.30		30	11.36	33.34		25.44	255	0.09
26	12.06	33.33		50	10.72	33.46		25.65	235	0.14
31	11.28	33.34								
36	11.16	33.39								
42	10.96	33.35								
52	10.65	33.49								

CREST; March 10, 1954; 1814 GCT; 33°11'N, 118°23.5'W; sounding, 700 fm; wind, 280°, force 4; weather, cloudy; sea, rough; wire angle, 15°.

90.37

0	14.9	33.31		0	14.9	33.31		24.71	324	0.00
10	14.68	33.55r		10	14.68	33.30		24.75	320	0.03
30	13.13	33.30		20	14.26	33.30		24.84	312	0.06
45	10.98	33.30		30	13.13	33.30		25.07	290	0.09
55	10.59	33.36		50	10.70	33.32		25.54	245	0.15
65	10.61	33.47		75	10.41	33.55		25.77	223	0.21
74	10.42	33.55		100	10.33	33.73		25.93	208	0.26
84	10.39	33.58		150	9.74	34.15		26.35	168	0.36
98	10.37	33.71		200	9.29	34.11		26.40	164	0.44
107	10.18	33.78		250	8.47	34.15		26.56	148	0.52
131	9.96	33.87		300	7.81	34.18		26.68	137	0.60
159	9.63	34.18		400	7.00	34.19		26.80	126	0.73
211	9.15	34.10		500	6.35	34.25		26.94	112	0.86
273	8.10	34.17		600	5.71	34.31		27.07	100	0.97
382	7.12	34.18								
507	6.32	34.25								
639	5.50	34.33								

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{ cm}^3/\text{g}$	dyn. m

90.55

CREST; March 11, 1954; 0346, 0415 GCT; 32°35'N, 119°36.5'W; sounding, 570 fm; wind, 340°, force 6; weather, cloudy; sea, high; wire angle, 42°, 48°.

0	14.0	33.18		0	14.0	33.18		24.80	316	0.00
10	13.94	33.18		10	13.94	33.18		24.81	315	0.03
26	13.94	33.18		20	13.96	33.18		24.81	315	0.06
34	13.86	33.18		30	13.92	33.18		24.82	314	0.09
42	13.55	33.22		50	13.03	33.20		25.01	296	0.16
50	13.03	33.20		75	11.50	33.30		25.38	260	0.23
58	12.38	33.30		100	10.19	33.45		25.73	227	0.29
64	11.96	33.26		150	8.87	33.92		26.31	172	0.39
				200	8.53	34.04		26.46	158	0.47
78	11.37	33.32		250	8.04	34.12		26.60	145	0.55
98	10.25	33.43		300	7.53	34.18		26.72	133	0.62
119	9.54	33.65		400	6.74	34.23		26.87	119	0.75
160	8.77	33.97		500	6.31	34.26		26.95	111	0.87
211	8.46	34.06		600	5.76	34.29		27.04	103	0.99
289	7.66	34.17								
392	6.78	34.23								
520	6.22	34.26								
657	5.40	34.32								

90.70

CREST; March 11, 1954; 1254 GCT; 32°04'N, 120°40'W; sounding, 2200 fm; wind, 330°, force 6; weather, partly cloudy; sea, high; wire angle, 38°.

0	14.72	33.32		0	14.72	33.32		24.76	320	0.00
9	14.70	33.34		10	14.70	33.34		24.78	318	0.03
26	14.72	33.36		20	14.71	33.36		24.79	317	0.06
48	12.84	33.22		30	14.57	33.34		24.81	315	0.10
61	11.07	33.24		50	12.59	33.22		25.12	285	0.16
68	10.49	33.22		75	10.04	33.28		25.62	238	0.22
81	9.78	33.37		100	9.30	33.58		25.98	204	0.28
101	9.28	33.60		150	8.94	34.01		26.37	166	0.37
149	8.96	34.01		200	(8.29)	(34.05)		(26.51)	(153)	(0.45)
198	8.30	34.05		250	(7.76)	(34.12)		(26.64)	(141)	(0.53)
366	6.90	34.25		300	(7.36)	(34.18)		(26.74)	(131)	(0.60)
500	6.08	34.36		400	6.67	34.28		26.92	114	(0.73)
				500	6.08	34.36		27.06	101	(0.84)

90.135

N. B. SCOFIELD; March 20, 1954; 1815, 1841 GCT; 30°00'N, 125°00'W; sounding, 2000 fm; wind, 320°, force 2; weather, missing; sea, rough; wire angle, 05°, 03°.

0	15.63	33.35	5.47	0	15.63	33.35	5.47	24.58	337	0.00
11	15.62	33.36	5.56	10	15.63	33.36	5.55	24.59	336	0.03
43	15.68	33.37	5.68	20	15.63	33.36	5.60	24.59	336	0.07
				30	15.64	33.36	5.64	24.59	336	0.10
83	16.03	33.50	5.60	50	15.70	33.39	5.68	24.60	335	0.17
103	15.34	33.46	5.74	75	15.99	33.48	5.61	24.60	335	0.25
118	14.54	33.53	5.72	100	15.52	33.46	5.73	24.69	326	0.34
123	14.42	33.58	5.74	150	13.32	33.49	5.64	25.18	280	0.49
133	14.45	33.51	5.64	200	10.09	33.82	4.84	26.04	198	0.61
153	12.98	33.49	5.64	250	8.47	33.78	3.55	26.27	176	0.71
192	10.47	33.82	5.04	300	7.87	34.04	2.73	26.56	148	0.79
243	8.58	33.78	3.70	400	6.52	34.05	1.75	26.76	129	0.93
301	7.83	34.04	2.73	500	5.82	34.16	1.03	26.93	113	1.06
370	6.80	34.04	2.11	600	5.19	34.24	0.51	27.07	100	1.17
450	6.13	34.10	1.23	700	4.77	34.33	0.45	27.19	89	1.28
520	5.70	34.18	0.93	800	4.42	34.44	0.66	27.32	76	1.36
651	4.96	34.28	0.42	1000	3.82	34.49	0.75	27.42	67	1.52
824	4.36	34.45	0.70							
1013	3.81	34.49	0.74							

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

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CREST; March 12, 1954; 1435 GCT; 32°50'N, 117°31.5'W; sounding, 470 fm; wind, 360°, force 2; weather, partly cloudy; sea, rough; wire angle, 05°.

9330

0	14.6	33.35		0	14.6	33.35		24.81	315	0.00
10	14.60	33.33		10	14.60	33.33		24.79	317	0.03
32	11.88	33.44		20	14.60	33.38		24.83	313	0.06
42	11.18	33.52		30	12.12	33.43		25.37	262	0.09
52	10.74	33.59		50	10.81	33.58		25.72	228	0.14
62	10.66	33.58		75	10.45	33.65		25.84	217	0.20
72	10.51	33.62		100	10.10	33.80		26.02	200	0.25
82	10.34	33.68		150	9.61	34.01		26.27	176	0.34
92	10.28	33.68		200	9.41	34.29		26.52	152	0.43
102	10.08	33.82		250	8.96	34.36		26.64	141	0.50
127	9.88	33.89		300	8.23	34.35		26.75	130	0.57
156	9.56	34.05		400	7.10	34.29		26.87	119	0.70
207	9.38	34.31		500	6.33	34.26		26.95	111	0.83
267	8.74	34.36		600	5.68	34.35		27.10	97	0.94
372	7.35	34.31								
491	6.40	34.26								
619	5.58	34.37								

CREST; March 11, 1954; 1848 GCT; 31°29'N, 120°19.5'W; sounding, 2300 fm; wind, 350°, force 6; weather, cloudy; sea, high; wire angle, 33°.

9370

0	14.6	33.34		0	14.6	33.34		24.80	316	0.00
8	14.49	-		10	14.48	33.34		24.83	313	0.03
26	14.48	33.35		20	14.48	33.35		24.83	313	0.06
35	14.39	33.36		30	14.44	33.35		24.84	312	0.09
42	14.25	33.35		50	12.28	33.24		25.19	279	0.15
50	12.28	33.24		75	10.98	33.24		25.43	256	0.22
58	11.35	33.28		100	9.30	33.66		26.04	198	0.28
67	11.17	33.31		150	8.46	33.94		26.39	164	0.37
74	11.02	33.24		200	8.35	34.14		26.57	148	0.45
82	9.92	33.40		250	7.77	34.25		26.74	131	0.52
100	9.30	33.66		300	7.28	34.30		26.85	121	0.59
121	8.76	33.84		400	6.56	34.34		26.98	109	0.71
156	8.43	33.96		500	(5.99)	(34.34)		(27.05)	(102)	(0.82)
202	8.34	34.14								
282	7.44	34.29								
379	6.70	34.34								
491	6.02	34.34								

HORIZON; March 18, 1954; 2145 GCT; 31°58'N, 117°51'W; sounding, 750 fm; wind, 270°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°.

9740

0	14.5	-		0	14.5	(33.35)		(24.83)	(313)	(0.00)
10	14.25	33.35		10	14.25	33.35		24.88	308	0.03
30	14.18	33.34		20	14.20	33.35		24.89	307	0.06
45	12.34	33.28		30	14.18	33.34		24.89	307	0.09
55	11.10	33.58		50	11.56	33.41		25.46	253	0.15
65	10.58	33.30		75	10.23	33.38		25.67	233	0.21
75	10.23	33.38		100	9.63	33.53		25.89	212	0.27
84	9.95	33.48		150	9.18	34.00		26.33	170	0.36
99	9.65	33.53		200	8.73	34.13		26.50	154	0.45
109	9.40	33.68		250	8.43	34.23		26.63	142	0.52
133	9.12	33.89		300	8.20	34.30		26.72	133	0.59
163	9.18	34.10		400	6.87	34.30		26.91	115	0.72
217	8.55	34.14		500	6.17	34.36		27.05	102	0.84
281	8.32	34.30		600	5.63	34.40		27.15	92	0.94
394	6.92	34.30								
525	6.02	34.37								
662	5.34	34.42								

S10

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5403

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

97.60

HORIZON; March 18, 1954; 1229 GCT; 31°16.5'N, 119°09'W; sounding, 1350 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 18°.

0	14.5	33.40		0	14.5	33.40		24.87	309	0.00
10	14.43	33.37		10	14.43	33.37		24.86	310	0.03
30	14.44	33.40		20	14.45	33.38		24.86	310	0.06
45	12.74	33.42		30	14.44	33.40		24.88	308	0.09
54	11.46	33.37		50	12.00	33.40		25.37	262	0.15
64	10.48	33.42		75	9.87	33.49		25.82	219	0.21
74	9.88	33.48		100	9.15	33.70		26.10	192	0.26
83	9.69	33.53		150	8.42	33.98		26.43	161	0.35
98	9.16	33.67		200	7.63	34.04		26.60	145	0.43
107	9.07	33.77		250	7.48	34.11		26.67	138	0.50
131	8.66	33.92		300	7.21	34.26		26.83	123	0.57
160	8.26	34.00		400	6.38	34.32		26.99	108	0.69
213	7.52	34.05		500	5.88	34.37		27.09	98	0.80
275	7.42	34.22		600	5.40	34.46		27.22	86	0.90
388	6.48	34.31								
517	5.80	34.38								
653	5.17	34.51								

97.225

N. B. SCOFIELD; March 16, 1954; 1835 GCT; 25°52'N, 129°56'W; sounding, 2000 fm; wind, 340°, force 2; weather, cloudy; sea, slight; wire angle, 00°.

0	17.48	34.05	5.59	0	17.48	34.05	5.59	24.69	326	0.00
10	17.47	34.11	5.46	10	17.47	34.11	5.46	24.74	321	0.03
37	17.77	34.20	5.28	20	17.52	34.14	5.34	24.75	320	0.06
78	18.39	34.44	5.28	30	17.65	34.17	5.29	24.74	321	0.10
104	18.47	34.51	5.15	50	18.03	34.29	5.30	24.74	321	0.16
135	18.28	34.54	5.19	75	18.37	34.43	5.29	24.76	320	0.24
145	16.92	34.24	5.54	100	18.45	34.50	5.17	24.80	316	0.32
150	16.69	34.27	5.33	150	16.69	34.27	5.33	25.05	292	0.48
155	16.60	34.36	5.31	200	13.90	34.09	5.19	25.52	247	0.61
166	16.18	34.33	5.26	250	10.85	33.92	4.75	25.98	204	0.73
216	12.92	34.02	5.16	300	9.30	33.98	3.90	26.29	174	0.82
266	10.10	33.91	4.55	400	7.29	34.12	2.38	26.71	134	0.99
336	8.67	34.08	3.17	500	5.69	34.14	1.46	26.93	113	1.12
426	6.82	34.13	2.15	600	5.35	34.18	0.59	27.01	106	1.23
527	5.54	34.14	1.11	700	5.01	34.34	0.52	27.17	91	1.34
658	5.19	34.25	0.48	800	4.57	34.51	0.74	27.36	73	1.43
832	4.46	34.52	0.78	1000	3.92	34.53	0.80	27.44	65	1.58
1020	3.88	34.53	0.78							

98.150

N. B. SCOFIELD; March 21, 1954; 1825 GCT; 28°00'N, 125°00'W; sounding, 2000 fm; wind, 340°, force 4; weather, drizzle; sea, moderate; wire angle, 20°.

0	17.48	33.68	5.43	0	17.48	33.68	5.43	24.41	353	0.00
10	17.52	33.78	5.57	10	17.52	33.78	5.57	24.48	346	0.04
45	17.54	33.85	5.50	20	17.53	33.80	5.55	24.49	345	0.07
83	17.70	33.95	5.43	30	17.53	33.82	5.53	24.50	344	0.10
102	17.50	33.86	5.51	50	17.55	33.87	5.49	24.54	340	0.17
111	17.63	33.98	5.45	75	17.68	33.93	5.45	24.55	340	0.26
116	17.61	34.01	5.57	100	17.50	33.86	5.51	24.54	340	0.34
120	17.56	34.06	5.49	150	14.93	33.83	5.55	25.11	286	0.50
134	16.38	33.96	5.63	200	11.43	33.55	4.65	25.59	240	0.64
198	11.49	33.55	4.67	250	9.61	33.93	3.66	26.20	183	0.74
244	9.80	33.92	3.69	300	8.18	33.98	3.12	26.47	157	0.83
308	8.04	33.78r	3.81r	400	6.84	34.15	2.02	26.79	127	0.98
387	7.00	34.12	2.20	500	5.99	34.30	0.91	27.02	105	1.10
485	6.08	34.29	1.01	600	5.47	34.32	0.56	27.10	97	1.21
610	5.42	34.32	0.56	700	5.04	34.33	0.66	27.16	92	1.31
774	4.79	34.33	0.76	800	4.80	34.34	0.77	27.20	88	1.41
1055	4.14	34.52	0.70	1000	4.23	34.49	0.73	27.38	71	1.58

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

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HORIZON; March 16, 1954; 1412 GCT; 31°42'N, 116°44.5'W; sounding, 90 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 03°.

10029

0	12.83	33.47		0	12.83	33.47		25.26	272	0.00
10	12.05	33.48		10	12.05	33.48		25.42	257	0.03
15	11.30	33.49		20	10.63	33.57		25.75	225	0.05
20	10.63	33.57		30	10.33	33.59		25.82	219	0.07
25	10.45	33.60		50	10.12	33.68		25.92	209	0.12
31	10.32	33.59								
36	10.32	33.59								
41	10.31	33.61								
51	10.10	33.69								

HORIZON; March 16, 1954; 2350 GCT; 31°03.5'N, 118°03'W; sounding, 950 fm; wind, 220°, force 3; weather, overcast; sea, rough; wire angle, 36°.

10050

0	14.5	33.22		0	14.5	33.22		24.73	322	0.00
9	14.42	33.26		10	14.42	33.26		24.78	318	0.03
22	-	33.26		20	14.08	33.26		24.85	311	0.06
48	13.58	33.25		30	13.90	33.26		24.88	308	0.10
56	12.48	33.13		50	13.48	33.24		24.96	300	0.16
65	11.76	33.10		75	11.09	33.14		25.33	265	0.23
77	10.96	33.19		100	9.69	33.46		25.82	219	0.29
93	9.90	33.39		150	8.88	33.85		26.26	177	0.39
112	9.46	33.58		200	8.24	33.99		26.47	157	0.47
136	9.08	33.77		250	7.52	34.01		26.59	146	0.55
179	8.54	33.96		300	6.90	34.05		26.71	134	0.62
243	7.60	34.01		400	6.32	34.16		26.87	119	0.75
331	6.64	34.09		500	5.98	34.25		26.98	109	0.87
452	6.16	34.21		600	5.44	34.33		27.11	96	0.98
615p	5.36	34.34								

HORIZON; March 17, 1954; 1031 GCT; 30°24.5'N, 119°24.5'W; sounding, 2100 fm; wind, 320°, force 6; weather, partly cloudy; sea, rough; wire angle, 25°.

10070

0	15.6	33.25		0	15.6	33.25		24.51	343	0.00
9	15.52	33.23		10	15.52	33.23		24.52	342	0.03
27	15.50	33.29		20	15.50	33.27		24.55	340	0.07
50	15.53	33.24		30	15.50	33.29		24.57	338	0.10
63	15.52	33.36		50	15.53	33.24		24.52	342	0.17
73	14.36	33.21		75	14.13	33.17		24.77	319	0.25
86	13.18	33.14		100	12.15	33.15		25.15	282	0.33
109	11.54	33.17		150	9.53	33.60		25.96	205	0.45
141	9.81	33.48		200	8.45	33.94		26.40	164	0.55
165	9.14	33.71		250	7.72	34.09		26.62	143	0.62
220	8.12	34.04		300	7.18	34.14		26.74	131	0.70
302	7.16	34.14		400	6.32	34.22		26.92	114	0.82
411	6.26	34.24		500	5.95	34.36		27.07	100	0.94
561	5.76	34.42		600	5.60	34.44		27.18	90	1.04
765	4.76	34.49		700	5.08	34.47		27.27	81	1.13
1012	3.92	34.58		800	4.62	34.50		27.34	74	1.22
1347	3.13	34.43r		1000	3.97	34.58		27.48	61	1.37

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

100.90

HORIZON; March 17, 1954; 2220 GCT; 29°39'N, 120°47'W; sounding, 2200 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 22°.

0	15.5	33.40		0	15.5	33.40		24.65	330	0.00
9	15.54	33.37		10	15.56	33.37		24.61	334	0.03
28	15.38	33.35		20	15.42	33.35		24.63	332	0.07
51	15.36	-		30	15.38	33.35		24.64	331	0.10
66	15.27	33.35		50	15.37	33.36		24.65	330	0.17
75	14.52	33.19		75	14.52	33.19		24.70	325	0.25
89	14.18	33.24		100	13.16	33.23		25.01	296	0.33
112	11.80	33.22		150	10.08	33.49		25.78	222	0.46
145	10.24	33.44		200	8.94	33.73		26.15	187	0.56
169	9.54	33.58		250	8.14	34.01		26.50	154	0.65
226	8.56	33.89		300	7.39	34.15		26.72	133	0.72
308	7.31	34.16		400	6.52	34.24		26.91	115	0.85
419	6.42	34.25		500	6.15	34.38		27.07	100	0.97
569	5.94	34.47		600	5.80	34.49		27.20	88	1.07
773	4.90	34.51		700	5.27	34.51		27.28	80	1.16
1022	3.95	34.51		800	4.78	34.51		27.33	75	1.25
1357	3.06	34.67		1000	4.01	34.51		27.42	67	1.40

102.75

N. B. SCOFIELD; April 5, 1954; 1717 GCT; 29°51'N, 119°48'W; sounding, 1000 fm; wind, 340°, force 2; weather, cloudy; sea, slight; wire angle, 15°.

0	14.75	33.19	6.17	0	14.75	33.19	6.17	24.65	330	0.00
10	14.73	33.15	6.05	10	14.73	33.15	6.05	24.63	332	0.03
30	14.72	33.21	6.18	20	14.73	33.19	6.13	24.66	329	0.07
50	14.44	33.15	6.24	30	14.72	33.21	6.18	24.67	328	0.10
65	14.12	33.04	6.18	50	14.44	33.15	6.24	24.69	326	0.16
80	13.16	33.08	6.23	75	13.46	33.05	6.23	24.81	315	0.24
100	12.47	33.24	5.93	100	12.47	33.24	5.93	25.15	282	0.32
119	11.66	33.23	5.70	150	10.08	33.39	4.89	25.70	230	0.45
157	9.80	33.48	4.68	200	8.68	33.91	3.71	26.34	169	0.55
204	8.60	33.93	3.64	250	7.94	33.96	2.99	26.49	155	0.63
252	7.89	33.97	2.97	300	7.35	34.06	2.32	26.65	140	0.71
319	7.16	34.09	2.11	400	6.44	34.14	1.38	26.84	122	0.84
400	6.44	34.14	1.38	500	6.10	34.31	0.51	27.02	105	0.96
500	6.10	34.31	0.51	600	5.68	34.47	0.32	27.20	88	1.07
625	5.58	34.50	0.31	700	5.22		0.36			
793	4.82	34.45a)	0.43	800	(4.82)		(0.43)			

103.30

HORIZON; March 16, 1954; 0932 GCT; 31°07'N, 116°27.5'W; sounding, 42 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

0	14.03	33.37		0	14.03	33.37		24.94	302	0.00
10	13.96	33.37		10	13.96	33.37		24.96	300	0.03
15	12.40	33.33		20	11.68	33.42		25.44	255	0.06
20	11.68	33.42		30	10.55	33.46		25.68	232	0.08
25	11.00	33.42		50	10.10	33.69		25.93	208	0.13
30	10.55	33.46								
35	10.39	33.55								
40	10.37	33.56								
50	10.10	33.69								

a) Alternate value, 34.60‰; both values rejected.

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ _t	δ _T ³	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm ³ /g	dyn. m

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HORIZON; March 16, 1954; 0418 GCT; 30°49'N, 117°07'W; sounding, 900 fm; wind, 320°, force 2; weather, clear; sea, smooth; wire angle, 20°.

103.40

0	15.5	33.30		0	15.5	33.30		24.57	338	0.00
10	15.46	33.40		10	15.46	33.40		24.66	329	0.03
30	15.34	33.35		20	15.39	33.38		24.66	329	0.07
44	13.81	33.24		30	15.34	33.35		24.65	330	0.10
53	13.37	33.28		50	13.47	33.27		24.98	299	0.16
62	13.06	33.25		75	12.37	33.25		25.18	280	0.24
71	12.52	33.26		100	10.61	33.41		25.63	237	0.30
80	12.16	33.22		150	9.47	33.90		26.20	183	0.41
94	10.87	33.32		200	8.97	34.10		26.44	160	0.49
103	10.50	33.46		250	8.43	34.21		26.61	144	0.57
126	9.86	33.62		300	8.16	34.27		26.70	135	0.64
153	9.42	33.95		400	7.34	34.32		26.86	120	0.78
203	8.92	34.11		500	6.28	34.34		27.02	105	0.90
263	8.32	34.23		600	5.73	34.38		27.12	95	1.00
370	7.73	34.31								
492	6.36	34.34								
625	5.64	34.40								

HORIZON; March 15, 1954; 1858 GCT; 30°10'N, 118°23'W; sounding, 1550 fm; wind, 320°, force 3; weather, partly cloudy; sea, slight; wire angle, 10°.

103.60

0	15.2	33.28		0	15.2	33.28		24.62	333	0.00
10	14.95	33.30		10	14.95	33.30		24.69	326	0.03
30	14.88	33.30		20	14.90	33.30		24.70	325	0.07
45	14.86	33.31		30	14.88	33.30		24.71	324	0.10
55	14.85	33.23		50	14.87	33.28		24.70	325	0.16
65	14.07	-		75	12.74	33.24		25.10	287	0.24
75	12.74	33.24		100	11.36	33.08		25.24	274	0.31
85	11.90	33.16		150	9.38	33.58		25.97	204	0.43
100	11.36	33.08		200	8.52	33.93		26.38	166	0.53
109	10.92	33.26		250	7.94	34.06		26.57	148	0.61
134	9.88	33.48		300	7.32	34.11		26.69	136	0.68
163	9.06	33.69		400	6.18	34.15		26.88	118	0.81
217	8.32	33.99		500	5.65	34.30		27.07	100	0.93
281	7.59	34.10		600	5.32	34.39		27.18	90	1.03
396	6.22	34.15								
527	5.55	34.34								
664	5.14	34.43								

N. B. SCOFIELD; March 15, 1954; 1807 GCT; 24°12'N, 130°00'W; sounding, 2000 fm; wind, 020°, force 3; weather, overcast; sea, moderate; wire angle, 06°.

103.240

0	18.88	34.62	4.99	0	18.88	34.62	4.99	24.78	318	0.00
10	18.87	34.49	5.02	10	18.87	34.49	5.02	24.68	327	0.03
43	18.91	34.50	5.11	20	18.87	34.49	5.11	24.68	327	0.07
57	19.05	34.61	4.91	30	18.88	34.49	5.12	24.68	327	0.10
67	19.08	34.57	4.88	50	18.99	34.57	5.03	24.71	324	0.16
88	19.09	34.60r	5.11r	75	19.10	34.52	4.96	24.65	330	0.24
103	-	34.58r	5.15r	100	18.85	34.40	5.40	24.62	333	0.33
113	18.21	34.35	5.48	150	16.50	34.22	5.45	25.05	292	0.49
117	18.18r	34.40r	5.55r	200	12.97	33.91	4.95	25.57	242	0.62
122	17.88	34.33	5.34	250	10.05	33.87	4.35	26.08	194	0.73
132	17.31	34.30	5.55	300	8.75	34.00	3.46	26.40	164	0.83
171	15.50	34.09	5.21	400	7.40	34.19	1.81	26.75	130	0.98
225	10.95	33.83	4.72	500	6.76	34.31	0.70	26.93	113	1.11
371	7.60	34.14	2.23	600	5.84	34.30	0.69	27.04	103	1.22
513	6.68	34.31	0.68	700	5.22	34.31	0.77	27.12	95	1.33
643	5.53	34.30	0.71	800	4.78	34.42	0.88	27.26	82	1.43
811	4.75	34.42	0.88	1000	(4.05)	(34.43)	(0.73)	(27.35)	(74)	(1.60)
998	4.04	34.48	0.72							

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5}cm/g	dyn. m

107.35

HORIZON; March 15, 1954; 0131 GCT; 30°19.5'N, 116°23'W; sounding, 1100 fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 25°.

0	15.6	33.73r		0	15.6	(33.49)		(24.70)	(325)	(0.00)
10	15.56	33.48		10	15.56	33.48		24.70	325	0.03
28	15.46	33.42		20	15.48	33.43		24.68	327	0.06
38	15.44	33.42		30	15.46	33.42		24.67	328	0.10
47	15.36	33.44		50	15.12	33.44		24.76	320	0.16
56	14.15	33.27		75	12.02	33.30		25.29	269	0.24
64	13.10	33.24		100	10.58	33.47		25.68	232	0.30
73	12.11	33.29		150	9.60	33.95		26.22	181	0.40
81	11.80	33.32		200	9.51	34.32		26.52	152	0.49
90	10.91	33.41		250	8.82	34.37		26.67	138	0.56
109	10.32	33.51		300	8.08	34.33		26.76	129	0.63
133	9.63	33.76		400	7.30	34.38		26.91	115	0.76
173	9.58	34.13		500	6.47	34.42		27.05	102	0.88
220	9.37	34.38								
305	8.03	34.33								
408	7.26	34.38								
525	6.26	34.43								

107.50

HORIZON; March 15, 1954; 0937 GCT; 29°50'N, 117°24'W; sounding, 1475 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 05°.

0	15.2	33.39		0	15.2	33.39		24.71	324	0.00
10	15.21	33.40		10	15.21	33.40		24.71	324	0.03
31	15.16	33.43		20	15.22	33.42		24.73	322	0.06
46	14.08	33.35		30	15.17	33.43		24.75	320	0.10
56	13.84	33.33		50	13.98	33.34		24.93	303	0.16
66	12.97	33.26		75	11.97	33.21		25.23	275	0.23
76	11.88	33.21		100	10.10	33.29		25.62	238	0.30
86	11.09	33.28		150	8.87	33.73		26.17	185	0.40
100	10.10	33.29		200	8.08	34.00		26.50	154	0.49
110	9.66	33.41		250	8.18	34.13		26.58	146	0.57
135	9.12	33.64		300	8.20	34.36		26.76	129	0.64
165	8.62	33.86		400	7.08	34.31		26.89	117	0.77
219	7.96	34.04		500	6.13	34.36		27.05	102	0.88
283	8.28	34.35		600	5.49	34.41		27.17	91	0.99
398	7.13	34.31								
529	5.96	34.38								
666	5.18	34.43								

108.95

N. B. SCOFIELD; April 4, 1954; 1710 GCT; 27°58'N, 120°15'W; sounding, 1000 fm; wind, 020°, force 1; weather, overcast; sea, slight; wire angle, 05°.

0	16.28	33.48	5.98	0	16.28	33.48	5.98	24.54	340	0.00
10	16.28	33.46	5.85	10	16.28	33.46	5.85	24.52	342	0.03
77	15.86	33.39	5.92	20	16.25	33.45	5.87	24.52	342	0.07
98	14.54	33.42	5.92	30	16.22	33.44	5.88	24.52	342	0.10
108	13.72	33.35	5.78	50	16.12	33.42	5.89	24.53	341	0.17
114	13.47	33.30	5.63	75	15.90	33.39	5.92	24.55	340	0.26
119	13.40	33.32	5.52	100	14.38	33.42	5.92	24.91	305	0.34
129	12.76	33.33	5.23	150	11.52	33.54	4.25	25.57	242	0.48
154	11.32	33.58	4.07	200	10.52	34.09	2.10	26.17	185	0.59
204	10.45	34.14	2.07	250	9.68	34.30	1.90	26.48	156	0.67
263	9.46	34.31	1.84	300	8.93	34.30	1.48	26.60	145	0.75
332	8.56	34.29	1.13	400	8.07	34.31	0.76	26.74	131	0.90
418	7.92	34.32	0.67	500	6.89	34.39	0.45	26.97	110	1.02
523	6.68	34.41	0.39	600	6.07	34.46	0.30	27.14	93	1.13
653	5.72	34.20r	0.28	700	5.43	34.51	0.31	27.26	82	1.23
825	4.78	34.55	0.49	800	4.90	34.54	0.47	27.34	74	1.32
1012	4.14	34.58	0.50	1000	4.17	34.58	0.50	27.46	63	1.47

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

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HORIZON; March 14, 1954; 1037 GCT; 29°50.5'N, 115°52.5'W; sounding, 55 fm; wind, 120°, force 2; weather, cloudy; sea, rough; wire angle, 00°.

110.33

0	12.25	33.42		0	12.25	33.42		25.34	264	0.00
10	11.42	33.49		10	11.42	33.49		25.55	244	0.02
15	11.18	33.53		20	11.16	33.51		25.61	239	0.05
21	11.14	33.50		30	10.82	33.48		25.65	235	0.07
26	11.12	33.43		50	9.88	33.61		25.91	210	0.12
31	10.77	33.51								
36	10.56	33.58								
41	10.24	33.59								
52	9.82	33.62								

HORIZON; March 14, 1954; 1227, 1317 GCT; 29°30'N, 116°25.5'W; sounding, 1120 fm; wind, 320°, force 4; weather, clear; sea, very rough; wire angle, 27°, 20°.

110.40

0	15.3	33.36		0	15.3	33.36		24.66	329	0.00
10	15.10	33.38		10	15.10	33.38		24.72	323	0.03
25	15.10	33.36		20	15.10	33.37		24.72	323	0.06
54	14.86	33.33		30	15.08	33.35		24.70	325	0.10
64	14.60	33.30		50	14.91	33.34		24.73	322	0.16
				75	13.29	33.27		25.02	295	0.24
73	13.44	33.27		100	11.80	33.29		25.32	266	0.31
88	12.64	33.26		150	9.97	33.61		25.89	212	0.43
107	11.31	33.40		200	9.52	34.10		26.35	168	0.53
131	10.10	33.49		250	8.72	34.20		26.56	148	0.61
160	9.93	33.89		300	8.13	34.26		26.69	136	0.68
212	9.32	34.13		400	7.53	34.32		26.83	123	0.82
289	8.23	34.25		500	6.78	34.35		26.96	110	0.94
395	7.58	34.32		600	6.00	34.38		27.08	99	1.05
535	6.50	34.36		700	5.38	34.41		27.18	90	1.16
724	5.22	34.42		800	4.85	34.44		27.27	81	1.25
959	4.18	34.47		1000	4.06	34.48		27.39	70	1.42
1271	3.37	34.55								

HORIZON; March 14, 1954; 0144 GCT; 28°56'N, 117°39'W; sounding, 2000 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°.

110.60

0	16.4	33.32		0	16.4	33.32		24.39	355	0.00
10	15.20	33.25		10	15.20	33.25		24.60	335	0.04
26	15.20	33.30		20	15.22	33.28		24.62	333	0.07
57	14.36	33.25		30	15.17	33.30		24.65	330	0.10
67	13.56	33.18		50	14.73	33.28		24.73	322	0.17
77	12.74	33.18		75	12.89	33.18		25.03	294	0.24
92	11.62	33.20		100	10.88	33.23		25.44	255	0.31
111	10.20	33.40		150	9.50	33.77		26.10	192	0.43
136	9.60	33.60		200	8.61	34.02		26.43	161	0.52
165	9.32	33.95		250	8.17	34.09		26.56	148	0.60
221	8.36	34.04		300	7.89	34.21		26.69	136	0.67
301	7.88	34.21		400	7.10	34.27		26.85	121	0.80
411	7.00	34.27		500	6.29	34.32		27.00	107	0.92
555	5.94	34.35		600	5.69	34.37		27.12	95	1.03
750	5.01	34.42		700	5.25	34.40		27.19	89	1.13
992	4.08	34.49		800	4.82	34.44		27.27	81	1.22
1310	3.30	34.54		1000	4.07	34.49		27.40	69	1.39

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

110.80 HORIZON; March 13, 1954; 1524 GCT; 28°15'N, 118°45.5'W; sounding, 2200 fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 16°.

0	16.2	33.51		0	16.2	33.51		24.58	337	0.00
10	16.26	33.41		10	16.26	33.41		24.49	345	0.03
25	16.27	33.47		20	16.25	33.45		24.52	342	0.07
54	16.29	33.44		30	16.26	33.48		24.54	340	0.10
64	16.28	33.45		50	16.28	33.44		24.51	343	0.17
73	16.29	33.47		75	16.29	33.47		24.53	341	0.26
87	15.95	33.44		100	14.88	33.39		24.78	318	0.34
106	14.32	33.37		150	11.37	33.41		25.49	250	0.48
129	13.04	33.44		200	9.20	33.66		26.06	196	0.60
157	10.90	33.31		250	8.38	33.96		26.42	162	0.69
206	9.09	33.76		300	7.62	34.08		26.63	142	0.77
280	7.95	34.05		400	6.68	34.16		26.82	124	0.90
380	6.78	34.14		500	6.32	34.31		26.99	108	1.03
515	6.24	34.34		600	5.72	34.40		27.14	93	1.14
697	5.22	34.43		700	5.20	34.43		27.22	86	1.23
925	4.38	34.47		800	4.82	34.45		27.28	80	1.32
1231	3.46	34.52		1000	4.13	34.48		27.38	71	1.49

110.175 N. B. SCOFIELD; March 22, 1954; 1755 GCT; 25°16'N, 125°08'W; sounding, 2000 fm; wind, 330°, force 5; weather, drizzle; sea, moderate; wire angle, 24°.

0	17.58	33.87	5.45	0	17.58	33.87	5.45	24.53	341	0.00
10	17.59	33.75	5.57	10	17.59	33.75	5.57	24.44	350	0.04
48	17.48	33.82	5.60	20	17.58	33.75	5.61	24.44	350	0.07
101	17.39	33.99	5.46	30	17.55	33.77	5.62	24.46	348	0.10
105	17.38	33.95	5.58	50	17.47	33.83	5.60	24.53	341	0.17
109	17.31	33.96	5.44	75	17.42	33.92	5.53	24.61	334	0.26
118	17.21	33.87	5.52	100	17.39	33.99	5.46	24.67	328	0.34
132	15.60	33.86	5.38	150	14.15	33.64	5.27	25.13	284	0.50
151	14.12	33.64	5.25	200	10.80	33.75	4.60	25.86	215	0.62
195	11.09	33.72	4.70	250	9.22	33.97	3.20	26.30	173	0.72
240	9.43	33.93	3.35	300	8.46	34.11	2.73	26.53	151	0.81
302	8.44	34.11	2.69	400	7.57	34.22	1.10	26.75	130	0.96
377	7.80	34.18	1.23	500	6.55	34.38	0.82	27.01	106	1.08
471	6.85	34.38	0.89	600	5.79	34.34	0.32	27.08	99	1.19
590	5.86	34.34	0.32	700	5.23	34.34	0.32	27.15	92	1.29
752	5.00	34.34	0.31	800	4.79	34.35	0.34	27.21	87	1.39
934	4.20	34.48	0.61	1000	(3.94)	(34.54)		(27.45)	(64)	(1.56)

113.35 HORIZON; March 12, 1954; 1349, 1428 GCT; 29°11'N, 115°39.5'W; sounding, 720 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 43°, 46°.

0	14.5	33.30		0	14.5	33.30		24.79	317	0.00
9	14.58	33.31		10	14.57	33.31		24.78	318	0.03
24	14.58	33.26		20	14.58	33.27		24.75	320	0.06
35	14.54	33.37		30	14.57	33.32		24.79	317	0.10
43	14.37	33.24		50	13.37	33.16		24.92	304	0.16
49	13.46	33.17		75	11.23	33.18		25.34	264	0.23
56	12.82	33.15		100	10.24	33.52		25.78	222	0.29
63	12.09	33.28								
73	11.38	33.18								
80	10.92	33.18								
82	10.83	33.22								
99	10.28	33.51								
134	9.78	33.78								

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

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HORIZON; March 13, 1954; 0021, 0049 GCT; 28°45'N, 116°43'W; sounding, 1700 fm; wind, 280°, force 4; weather, cloudy; sea, high; wire angle, 15°, 10°.

113.50

0	15.7	33.40		0	15.7	33.40		24.61	334	0.00
10	15.59	33.41		10	15.59	33.41		24.64	331	0.03
30	15.46	33.40		20	15.47	33.40		24.66	329	0.07
45	15.47	33.40		30	15.46	33.40		24.66	329	0.10
55	15.04	33.35		50	15.30	33.39		24.69	326	0.16
				75	14.42	33.42		24.90	306	0.24
65	14.66	33.31		100	12.21	33.24		25.20	278	0.32
75	14.42	33.42		150	9.62	33.57		25.92	209	0.44
85	13.91	33.31		200	8.87	34.01		26.38	166	0.54
100	12.21	33.24		250	8.38	34.11		26.54	150	0.62
110	11.64	33.31		300	7.94	34.20		26.68	137	0.69
134	10.38	33.44		400	7.22	34.36		26.91	115	0.82
164	9.30	33.78		500	6.52	34.38		27.02	105	0.94
218	8.70	34.06		600	5.82	34.40		27.12	95	1.05
282	8.08	34.16								
396	7.26	34.36								
527	6.38	34.38								
665	5.40	34.44								

HORIZON; March 12, 1954; 0037 GCT; 28°47'N, 114°55'W; sounding, 55 fm; wind, 320°, force 7; weather, partly cloudy; sea, very high; wire angle, 47°.

117.30

0	14.03	33.44		0	14.03	33.44		25.00	297	0.00
9	14.05	33.41		10	14.04	33.41		24.97	300	0.03
12	14.02	33.42		20	14.02	33.42		24.98	299	0.06
16	14.00	33.43		30	13.60	33.46		25.10	287	0.09
19	14.02	33.42		50	10.71	33.45		25.64	236	0.14
23	14.00	33.43								
27	13.94	33.44								
34	12.77	33.64								
40	11.35	33.42								
51	10.66	33.46								

HORIZON; March 11, 1954; 1747 GCT; 28°27.5'N, 115°36'W; sounding, 550 fm; wind, 320°, force 6; weather, cloudy; sea, high; wire angle, 25°.

117.40

0	14.66	33.35		0	14.66	33.35		24.79	317	0.00
10	-	33.35		10	14.64	33.35		24.80	316	0.03
15	14.64	33.37		20	14.64	33.38		24.82	314	0.06
19	14.63	33.39		30	14.62	33.37		24.82	314	0.10
24	14.64	33.33		50	14.57	33.28		24.76	320	0.16
29	14.61	33.37		75	12.98	33.22		25.04	293	0.24
34	14.63	33.28		100	10.93	33.23		25.43	256	0.30
43	14.58	33.28		150	9.98	33.91		26.13	189	0.42
52	14.54	33.28		200	9.70	34.17		26.37	166	0.51
65	13.76	33.22		250	(9.68)	(34.40)		(26.56)	(148)	(0.59)
79	12.66	33.22								
97	11.05	33.23								
126	10.38	33.68								
159	9.86	33.96								
193	9.72	34.13								
243	9.67	34.37								

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{ cm}^3/\text{g}$	dyn. m

117.60 HORIZON; March 11, 1954; 0428 GCT; 27°47.5'N, 116°54'W; sounding, 2000 fm; wind, 320°, force 6; weather, overcast; sea, rough; wire angle, 40°.

0	15.9	33.27		0	15.9	33.27		24.46	348	0.00
9	15.79	33.29		10	15.79	33.29		24.50	344	0.04
24	15.79	33.26		20	15.79	33.26		24.48	346	0.07
36	15.80	33.28		30	15.80	33.27		24.48	346	0.10
44	15.76	33.28		50	15.62	33.27		24.52	342	0.17
50	15.62	33.27		75	15.17	33.23		24.59	336	0.26
58	15.60	33.33		100	14.52	33.40		24.86	310	0.34
66	15.37	33.25		150	10.61	33.47		25.67	233	0.48
76	15.14	33.23		200	9.52	33.96		26.24	179	0.58
83	14.66	33.17		250	9.00	34.12		26.45	159	0.67
102	14.49	33.40		300	8.49	34.20		26.59	146	0.75
124	12.40	33.32		400	7.42	34.30		26.83	123	0.89
163	10.16	33.56		500	6.67	34.34		26.97	110	1.01
210	9.40	34.01								
293	8.56	34.19								
395	7.47	34.30								
515	6.58	34.34								

118.110 N. B. SCOFIELD; April 3, 1954; 1718 GCT; 26°01'N, 120°00'W; sounding, 1000 fm; wind, 020°, force 3; weather, cloudy; sea, moderate; wire angle, 15°.

0	17.52	34.02	5.81	0	17.52	34.02	5.81	24.66	329	0.00
10	17.52	34.02	5.78	10	17.52	34.02	5.78	24.66	329	0.03
50	17.29	34.00	5.87	20	17.49	34.02	5.80	24.67	328	0.07
60	14.08	33.33	6.06	30	17.48	34.01	5.81	24.66	329	0.10
70	13.47	33.35	5.65	50	17.29	34.00	5.87	24.70	325	0.16
82p	11.02r	33.40	5.09	75	13.11	33.38	5.37	25.14	283	0.24
90	11.94	33.40	4.95	100	11.42	33.41	4.84	25.48	251	0.31
109	10.89	33.44	4.79	150	10.78	33.96	2.70	26.03	199	0.42
128	11.06	33.78	3.43	200	10.13	34.24	1.80	26.36	167	0.52
138	10.92	33.91	2.95	250	9.48	34.38	1.13	26.58	146	0.60
170p	10.53	34.02	2.41	300	8.80	34.38	0.92	26.68	137	0.67
184	10.34	34.15	2.15	400	7.50	34.36	0.62	26.87	119	0.80
256p	9.40	34.38	1.09	500	6.45	34.36	0.44	27.01	106	0.92
380p	7.76	34.36	0.65	600	5.75	34.37	0.28	27.11	96	1.03
500p	6.45	34.36	0.44							
632p	5.59	34.38	0.26							

119.190 N. B. SCOFIELD; March 23, 1954; 1937, 1951 GCT; 23°10'N, 125°04'W; sounding, 2000 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 25°, 26°.

0	18.47	34.14	5.33	0	18.47	34.14	5.33	24.52	342	0.00
10	18.45	34.02	5.60	10	18.45	34.02	5.60	24.43	351	0.04
				20	(18.45)	(34.03)	(5.57)	(24.44)	(350)	(0.07)
59	18.52	34.26	5.46	30	(18.45)	(34.05)	(5.55)	(24.45)	(349)	(0.10)
93	18.68	34.41	5.46	50	(18.48)	(34.18)	(5.49)	(24.55)	(340)	(0.17)
116	18.57	34.38	5.33	75	18.61	34.36	5.47	24.65	330	(0.26)
126	18.32	34.34	5.41	100	18.67	34.41	5.44	24.67	328	(0.34)
135	17.66	34.20	5.32	150	16.20	33.99	5.29	24.95	301	(0.50)
154	15.84	33.93	5.27	200	11.73	33.77	4.65	25.71	229	(0.64)
173	14.06	33.75	5.21	250	9.82	33.99	3.65	26.21	182	(0.74)
191	12.42	33.75	4.92	300	8.84	34.12	2.72	26.48	156	(0.83)
215	10.89	33.86	4.24	400	7.57	34.31	1.15	26.82	124	(0.97)
248	9.86	33.98	3.67	500	6.69	34.39	0.42	27.00	107	(1.10)
286	9.06	34.13	2.92	600	5.99	34.44	0.42	27.13	94	(1.20)
391	7.66	34.30	1.26							
518	6.56	34.40	0.41							
660	5.60	34.46	0.42							

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

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HORIZON; March 9, 1954; 0201, 0214 GCT; 28°22.5'N, 114°15'W; sounding, 30 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 07°, 06°.

120.25

0	15.58	33.67		0	15.58	33.67		24.84	312	0.00
11	15.57	33.48		10	15.58	33.48		24.69	326	0.03
16	15.40	33.52		20	15.38	33.49		24.75	320	0.06
21	15.36	33.49		30	13.90	33.48		25.05	292	0.10
26	14.77	33.52								
31	13.71	33.46								
36	12.96	33.46								
42	12.08	33.42								

HORIZON; March 9, 1954; 0726, 0747, 0800 GCT; 28°03'N, 114°53.5'W; sounding, 50 fm; wind, 290°, force 3; weather, clear; sea, slight; wire angle, 00°, 00°, 00°.

120.35

0	16.0	-		0	16.0	(33.62)		(24.71)	(324)	(0.00)
10	15.84	33.62		10	15.84	33.62		24.74	321	0.03
15	15.82	33.60		20	15.77	33.58		24.73	322	0.06
22	15.72	33.58		30	15.66	33.59		24.76	320	0.10
26	15.69	33.73		50	15.12	33.57		24.86	310	0.16
				75	(12.10)	(33.54)		(25.46)	(253)	(0.23)
31	15.64	33.59								
36	15.62	33.60								
46	15.52	33.60								
56	14.21	33.47								
71	12.48	33.52								

HORIZON; March 9, 1954; 1659 GCT; 27°31.5'N, 115°52'W; sounding, 2300 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 16°.

120.50

3	15.6	33.50		0	(15.6)	(33.50)		(24.70)	(325)	(0.00)
13	15.48	33.49		10	15.54	33.49		24.71	324	0.03
28	15.42	-		20	15.43	33.49		24.73	322	0.06
58	15.23	33.70		30	15.42	33.50		24.74	321	0.10
67	14.42	33.62		50	15.33	33.69		24.91	305	0.16
77	13.30	33.57		75	13.41	33.57		25.22	276	0.23
91	12.77	33.82		100	12.58	33.90		25.64	236	0.30
111	12.36	33.96		150	11.24	34.22		26.14	188	0.40
135	11.54	34.12		200	10.55	34.43		26.43	161	0.49
163	11.04	34.29		250	9.98	34.54		26.62	143	0.57
215	10.40	34.47		300	9.31	34.57		26.75	130	0.64
291	9.46	34.57		400	7.86	34.58		26.99	108	0.77
396	7.92	34.58		500	6.82	34.54		27.10	97	0.88
535	6.57	34.51		600	6.12	34.47		27.14	93	0.98
726	5.42	34.45		700	5.56	34.45		27.19	89	1.08
962	4.20	34.52		800	4.99	34.46		27.27	81	1.17
1276	3.34	34.57		1000	4.07	34.53		27.43	66	1.34

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T^3	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

120.70

HORIZON; March 10, 1954; 0305 GCT; 26°58'N, 117°17'W; sounding, 2100 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 17°.

0	16.1	33.52		0	16.1	33.52		24.61	334	0.00
10	16.26	33.50		10	16.26	33.50		24.56	339	0.03
25	16.58	33.70		20	16.57	33.68		24.62	333	0.07
54	14.80	33.44		30	16.37	33.68		24.67	328	0.10
63	14.42	33.48		50	15.00	33.44		24.79	317	0.16
73	13.08	33.33		75	12.88	33.33		25.14	283	0.24
87	11.96	33.42		100	11.18	33.47		25.57	242	0.31
106	10.92	33.48		150	10.63	34.05		26.12	190	0.42
129	10.64	33.68		200	10.13	34.29		26.40	164	0.51
157	10.60	34.11		250	9.54	34.37		26.56	148	0.59
209	10.02	34.31		300	9.04	34.41		26.67	138	0.66
284	9.20	34.40		400	8.10	34.43		26.83	123	0.80
387	8.28	34.43		500	6.90	34.38		26.97	110	0.92
524	6.68	34.38		600	6.07	34.39		27.08	99	1.03
709	5.38	34.42		700	5.42	34.42		27.19	89	1.14
938	4.29	34.46		800	4.88	34.44		27.27	81	1.23
1250	3.43	34.52		1000	4.07	34.47		27.38	71	1.40

120.90

HORIZON; March 10, 1954; 1258, 1335 GCT; 26°13'N, 118°27.5'W; sounding, 2300 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 35°, 47°.

0	16.5	33.57		0	16.5	33.57		24.55	340	0.00
10	16.44	33.65		10	16.44	33.65		24.63	332	0.03
23	16.38	33.59		20	16.40	33.61		24.61	334	0.07
48	14.99	33.52		30	16.10	33.56		24.64	331	0.10
56	14.04	33.58		50	14.78	33.53		24.91	305	0.16
64	12.82	33.32		75	11.77	33.34		25.36	262	0.24
76	11.72	33.34		100	11.28	33.56		25.63	237	0.30
91	11.47	33.49		150	11.08	34.27		26.21	182	0.40
109	11.12	33.61		200	9.59	34.17		26.39	164	0.49
133	11.16	33.94		250	8.66	34.16		26.53	151	0.57
175	10.78	34.30		300	8.30	34.29		26.69	136	0.65
				400	7.34	34.34		26.87	119	0.78
218	8.94	34.13		500	6.72	34.40		27.01	106	0.90
296	8.35	34.28		600	6.16	34.47		27.13	94	1.01
404	7.30	34.34		700	5.40	34.51		27.26	82	1.10
552	6.44	34.44		800	4.77	34.52		27.34	74	1.19
745	5.10	34.52		1000	3.98	34.50		27.41	68	1.35
1034	3.89	34.49								

120.275

N. B. SCOFIELD; March 13, 1954; 1905 GCT; 20°09'N, 130°08'W; sounding, 2000 fm; wind, 050°, force 5; weather, overcast; sea, very rough; wire angle, 25°.

0	21.42	34.44	5.47	0	21.42	34.44	5.47	23.97	395	0.00
9	21.43	34.44	5.18	10	21.42	34.44	5.18	23.97	395	0.04
35	20.42	34.74	5.28	20	21.11	34.60	5.23	24.18	375	0.08
63	20.28	34.76	5.20	30	20.56	34.71	5.27	24.41	353	0.11
80	20.16	34.73	5.18	50	20.32	34.76	5.23	24.51	343	0.18
98	19.64	34.67	5.13	75	20.20	34.74	5.19	24.53	341	0.27
114	19.28	34.62	5.02	100	19.60	34.66	5.12	24.63	332	0.36
132	18.53	34.52	5.09	150	17.60	34.44	4.86	24.96	300	0.52
163	16.61	34.36	4.62	200	12.90	34.03	4.35	25.68	232	0.65
193	13.43	34.03	4.42	250	10.24	34.11	3.70	26.24	179	0.76
269	9.57	34.14	3.29	300	8.82	34.17	2.73	26.52	152	0.84
441p	7.03	34.26	0.71	400	7.45	34.24	1.25	26.78	128	0.99

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{ cm}^3/\text{g}$	dyn. m

S10
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HORIZON; March 8, 1954; 1453 GCT; 27°21.5'N, 114°53.5'W; sounding, 290 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 13°.

12340

0	15.3	33.68		0	15.3	33.68		24.91	305	0.00
10	15.25	33.69		10	15.25	33.69		24.93	303	0.03
15	15.24	-		20	15.28	33.71		24.94	302	0.06
20	15.28	33.71		30	14.86	33.72		25.04	293	0.09
25	15.22	33.74		50	12.45	33.84		25.62	238	0.14
30	14.86	33.72		75	11.58	33.91		25.84	217	0.20
40	14.26	33.89		100	11.32	34.08		26.02	200	0.25
50	12.45	33.84		150	10.92	34.50		26.42	162	0.34
65	11.67	33.86		200	10.34	34.50		26.52	152	0.43
79	11.55	33.93		250	9.81	34.51		26.62	143	0.50
98	11.34	34.07		300	8.98	34.48		26.73	132	0.57
122	11.15	34.16		400	7.76	34.40		26.86	120	0.70
160	10.82	34.51								
198	10.37	34.50								
247	9.88	34.51								
322	8.64	34.46								
403	7.73	34.40								

HORIZON; March 8, 1954; 0137 GCT; 26°38.5'N, 116°09.5'W; sounding, 2100 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 32°.

12360

0	16.9	33.87		0	16.9	33.87		24.69	326	0.00
10	16.80	33.86		10	16.80	33.86		24.71	324	0.03
27	16.68	33.85		20	16.69	33.85		24.72	323	0.06
40	16.68	33.92		30	16.68	33.86		24.73	322	0.10
48	16.66	33.87		50	16.63	33.87		24.75	320	0.16
56	16.43	33.87		75	13.52	33.64		25.26	272	0.24
64	15.44	33.69		100	11.92	34.01		25.86	215	0.30
72	14.08	33.68		150	10.92	33.98		26.02	200	0.40
84	11.96	33.48		200	10.65	34.45		26.43	161	0.50
90	11.78	33.68		250	9.89	34.46		26.57	148	0.58
107	11.96	34.04		300	9.14	34.46		26.69	136	0.65
129	10.82	33.96		400	7.88	34.46		26.89	117	0.78
165	10.95	34.35		500	6.85	34.45		27.03	104	0.90
211	10.50	34.46								
292	9.28	34.46								
394	7.94	34.46								
517	6.70	34.45								

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{ cm}^3/\text{g}$	dyn. m

126.125

N. B. SCOFIELD; April 2, 1954; 1707, 1813, 1830 GCT; 24°04'N, 119°58'W; sounding, 1000 fm; wind, 020°, force 4; weather, cloudy; sea, rough; wire angle, 02°, 16°, 16°.

0	17.88a)	33.79a)	-	0	17.88	33.79	5.70	24.40	354	0.00
10	17.88	33.75	-	10	17.88	33.75	5.78	24.37	357	0.04
21	17.87	33.77	-	20	17.87	33.77	5.77	24.38	356	0.07
31	17.88	33.75	-	30	17.87	33.75	5.76	24.37	357	0.11
42	17.88	33.78	-	50	17.98	34.02	5.75	24.55	340	0.18
52	17.98	34.03	-	75	17.34	33.86	5.74	24.58	337	0.26
62	17.77	33.89	-	100	16.93	34.07	5.72	24.86	310	0.34
73	17.34	33.86	-	150	13.00	33.68	5.23	25.39	260	0.49
83	17.45	33.87	-	200	10.28	33.87	3.27	26.04	198	0.61
94	17.73	34.11	-	250	9.73	34.11	1.82	26.32	171	0.70
104	16.25	33.97	-	300	8.75	34.17	1.31	26.53	151	0.79
				400	7.48	34.42	0.72	26.92	114	0.93
0	17.90r	33.82r	5.70	500	6.57	34.45	0.38	27.07	100	1.04
				600	5.82	34.45	0.36	27.16	92	1.14
10	17.90r	34.05r	5.78	700	5.18	34.48	0.37	27.26	82	1.24
83	17.66r	33.89r	5.73	800	4.76	34.53	0.43	27.35	74	1.32
88	17.34	33.84	5.76	1000	(4.11)	(34.61)		(27.49)	(60)	(1.48)
93	17.16	33.90	5.83							
102	17.62	34.05	5.70							
112	16.26r	33.82	5.79							
126	14.91	33.69	5.51							
154	12.67	33.68	5.16							
181	10.47	33.77	4.38							
236	9.95	34.18	2.01							
310	8.60	34.18	1.23							
390	7.56	34.41	0.78							
488	6.68	34.45	0.41							
611	5.72	34.45	0.36							
777	4.84	34.52	0.43							
959	4.22	34.60	0.56							

127.34

HORIZON; March 7, 1954; 0600 GCT; 26°55'N, 114°06.5'W; sounding, 55 fm; wind, 030°, force 6; weather, clear; sea, moderate; wire angle, 13°.

0	15.56	33.82		0	15.56	33.82		24.96	300	0.00
10	15.54	33.71		10	15.54	33.71		24.88	308	0.03
15	15.46	33.75		20	15.34	33.77		24.97	300	0.06
20	15.34	33.77		30	14.40	33.81		25.20	278	0.09
25	15.06	33.76		50	12.84	33.80		25.52	247	0.14
30	14.40	33.81								
35	13.94	33.71								
40	13.24	33.65								
50	12.84	33.80								

a) Interpolated temperature and salinity values from the surface through 100 meters were obtained from first cast; all other interpolated values, from second cast.

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

HORIZON; March 7, 1954; 1550 GCT; 26°12.5'N, 115°13'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 22°.

12750

0	18.7	34.27		0	18.7	34.27		24.56	339	0.00
10	18.71	34.29		10	18.71	34.29		24.57	338	0.03
29	18.72	34.31		20	18.73	34.31		24.58	337	0.07
43	18.72	34.23		30	18.73	34.31		24.58	337	0.10
53	18.70	34.31		50	18.72	34.30		24.58	337	0.17
63	18.71	34.28		75	14.65	33.90		25.22	276	0.25
72	15.45	33.95		100	12.63	33.99		25.70	230	0.31
82	13.84	33.87		150	11.13	34.17		26.13	189	0.42
96	12.98	33.99		200	10.97	34.43		26.36	167	0.51
106	12.24	33.98		250	10.65	34.57		26.52	152	0.59
129	11.71	34.33		300	9.64	34.58		26.70	135	0.66
158	11.00	34.16		400	8.02	34.41		26.83	123	0.80
211	10.98	34.48		500	7.02	34.42		26.98	109	0.92
275	10.28	34.58		600	6.12	34.39		27.08	99	1.04
387	8.20	34.41								
515	6.90	34.42								
649	5.70	34.36								

N. B. SCOFIELD; March 24, 1954; 1742 GCT; 20°44'N, 124°55'W; sounding, 2000 fm; wind, 060°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.

129210

0	20.18	34.66	5.29	0	20.18	34.66	5.29	24.47	347	0.00
10	20.19	34.61	5.45	10	20.19	34.61	5.45	24.43	351	0.04
36	20.18	34.58	5.54	20	20.18	34.59	5.51	24.42	352	0.07
71	19.77	34.57	5.23	30	20.18	34.58	5.54	24.41	353	0.10
100	18.74	34.41	5.39	50	20.06	34.58	5.44	24.45	349	0.18
115	18.32	34.39	5.40	75	19.65	34.56	5.24	24.54	340	0.26
125	17.95	34.28	5.30	100	18.74	34.41	5.39	24.66	329	0.35
134	17.00	33.98	5.35	150	15.10	34.14	4.80	25.31	267	0.50
144	15.70	34.14	5.12	200	11.59	34.04	2.01	25.94	207	0.62
188	11.90	34.02	2.85	250	10.78	34.49	0.42	26.44	160	0.71
245	10.85	34.47	0.43	300	10.10	34.60	0.34	26.64	141	0.79
312	9.97	34.60	0.33	400	8.80	34.51	0.30	26.79	127	0.93
403	8.72	34.51	0.28	500	7.51	34.50	0.23	26.97	110	1.06
504	7.48	34.50	0.22	600	6.60	34.47	0.24	27.08	99	1.17
631	6.37	34.47	0.24	700	5.90	34.48	0.25	27.18	90	1.28
801	5.32	34.52	0.29	800	5.33	34.52	0.29	27.28	80	1.37
984	4.46	34.51	0.45	1000	(4.40)	(34.51)	(0.48)	(27.38)	(71)	(1.54)

HORIZON; March 7, 1954; 0051 GCT; 26°29.5'N, 113°29'W; sounding, 45 fm; wind, 300°, force 5; weather, partly cloudy; sea, rough; wire angle, 11°.

13030

0	16.46	33.93		0	16.46	33.93		24.84	312	0.00
10	15.91	33.89		10	15.91	33.89		24.93	303	0.03
15	14.92	33.87		20	14.52	33.87		25.22	276	0.06
20	14.52	33.87		30	14.16	33.84		25.28	270	0.09
25	14.36	33.95		50	13.29	33.94		25.53	246	0.14
30	14.16	33.84								
35	13.79	33.98								
41	13.82	33.84								
51	13.21	33.96								

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T^3	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

130.40

HORIZON; March 6, 1954; 1912 GCT; 26°07'N, 114°09'W; sounding, 1200 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 20°.

2	18.2	34.16		0	(18.2)	(34.16)		(24.60)	(335)	(0.00)
12	18.03	34.26		10	18.10	34.26		24.70	325	0.03
27	18.00	34.22		20	18.01	34.23		24.70	325	0.07
56	17.68	34.30		30	17.99	34.22		24.70	325	0.10
65	16.99	34.05		50	17.79	34.30		24.81	315	0.16
75	14.56	34.09		75	14.56	34.09		25.39	260	0.24
89	13.21	33.73		100	13.13	33.73		25.40	259	0.30
108	13.08	34.07		150	11.40	34.29		26.17	185	0.41
130	12.46	34.24		200	10.78	34.55		26.48	156	0.50
158	11.15	34.31		250	10.29	34.62		26.63	142	0.58
207	10.73	34.57		300	9.69	34.61		26.72	133	0.65
280	9.92	34.62		400	8.48	34.53		26.85	121	0.78
381	8.71	34.54		500	7.11	34.51		27.04	103	0.90
515	6.94	34.51		600	6.21	34.51		27.16	92	1.01
698	5.60	34.52		700	5.57	34.52		27.25	83	1.10
929	4.46	34.57		800	5.03	34.54		27.33	75	1.19
1238	3.49	34.60		1000	4.20	34.59		27.46	63	1.35

130.60

HORIZON; March 6, 1954; 0830 GCT; 25°24'N, 115°27'W; sounding, 2150 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 14°.

0	17.9	34.22		0	17.9	34.22		24.72	323	0.00
10	17.85	34.17		10	17.85	34.17		24.69	326	0.03
25	17.86	34.22		20	17.86	34.20		24.71	324	0.06
55	17.20	34.12		30	17.82	34.21		24.73	322	0.10
65	16.42	34.24		50	17.40	34.13		24.77	319	0.16
75	13.50	33.76		75	13.50	33.76		25.35	263	0.24
89	12.23	33.80		100	11.72	33.88		25.79	222	0.30
108	11.47	34.04		150	10.92	34.28		26.25	178	0.40
133	11.10	34.22		200	9.95	34.38		26.50	154	0.48
162	10.76	34.31		250	9.32	34.43		26.64	141	0.56
215	9.72	34.40		300	8.82	34.45		26.74	131	0.63
291	8.91	34.45		400	7.73	34.47		26.92	114	0.76
397	7.78	34.47		500	6.82	34.47		27.05	102	0.87
538	6.50	34.47		600	5.90	34.47		27.17	91	0.98
728	5.12	34.66r		700	5.27	34.47		27.25	83	1.07
966	4.20	34.47		800	4.78	34.47		27.30	78	1.16
1282	3.36	34.53		1000	4.08	34.47		27.38	71	1.33

133.30

HORIZON; March 5, 1954; 1555 GCT; 25°55.5'N, 113°08'W; sounding, 100 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 07°.

0	17.74	-		0	17.74	(34.15)		(24.70)	(325)	(0.00)
10	17.74	34.16		10	17.74	34.16		24.71	324	0.03
15	17.74	34.40		20	17.73	34.25		24.78	318	0.06
20	17.73	34.25		30	17.73	34.09		24.66	329	0.10
25	17.74	34.11		50	14.30	33.79		25.21	277	0.16
30	17.73	34.09		75	13.13	33.95		25.57	242	0.22
35	17.54	34.06		100	12.62	34.20		25.87	214	0.28
45	15.09	33.87		150	11.72	34.52		26.29	174	0.38
55	13.81	33.78								
65	13.38	33.86								
80	13.03	33.98								
100	12.62	34.20								
120	12.36	34.44								
155	11.60	34.53								

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

HORIZON: March 6, 1954; 0146 GCT; 25°15'N, 114°24.5'W; sounding, 1900 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 25°.

133.50

0	19.1	34.22		0	19.1	34.22		24.42	352	0.00
10	19.02	34.23		10	19.02	34.23		24.45	349	0.04
29	19.02	34.24		20	19.04	34.23		24.44	350	0.07
38	18.95	34.25		30	19.02	34.24		24.46	348	0.10
52	18.88	34.23		50	18.88	34.24		24.49	345	0.18
60	17.71	34.13		75	14.97	33.98		25.21	277	0.25
69	15.58	33.97		100	14.11	34.45		25.76	224	0.32
78	14.78	34.06		150	12.69	34.59		26.16	186	0.42
91	14.43	34.27		200	11.49	34.65		26.43	161	0.51
99	14.14	34.44		250	10.54	34.63		26.59	146	0.59
121	13.57	34.52		300	9.50	34.57		26.72	133	0.66
148	12.74	34.59		400	7.54	34.47		26.95	111	0.79
197	11.56	34.65		500	6.32	34.43		27.08	99	0.90
256	10.44	34.62		600	5.80	34.46		27.17	91	1.00
363	8.24	34.50								
487	6.40	34.43								
622	5.71	34.47								

N. B. SCOFIELD; April 1, 1954; 1735 GCT; 22°09'N, 119°57'W; sounding, 2000 fm; wind, 040°, force 4; weather, cloudy; sea, rough; wire angle, 10°.

135.140

0	18.47	33.80	5.49	0	18.47	33.80	5.49	24.26	367	0.00
10	18.46	33.84	5.54	10	18.46	33.84	5.54	24.29	364	0.04
56	18.44	34.07	5.55	20	18.47	33.90	5.54	24.33	360	0.07
77	18.56	34.14	5.55	30	18.46	33.93	5.55	24.36	358	0.11
88	18.00	34.17	5.59	50	18.44	34.04	5.55	24.45	349	0.18
93	17.15	33.95	5.68	75	18.56	34.15	5.55	24.50	344	0.27
97	16.43	33.82	5.67	100	15.86	33.79	5.65	24.87	309	0.35
107	15.11	33.73	5.57	150	11.87	33.61	4.47	25.56	243	0.49
139	12.47	33.56	4.90	200	10.52	34.22	2.33	26.27	176	0.60
188	10.70	34.16	2.67	250	9.98	34.34	1.45	26.46	158	0.68
252	9.92	34.34	1.40	300	9.27	34.37	0.82	26.60	145	0.76
331	8.76	-	0.65	400	7.82	34.40	0.52	26.85	121	0.90
415	7.65	34.40	0.48	500	6.81	34.42	0.27	27.01	106	1.02
518	6.66	34.42	0.26	600	6.08	34.43	0.24	27.11	96	1.13
647	5.80	34.43	0.24	700	5.46	34.44	0.28	27.20	88	1.23
817	4.83	34.51	0.41	800	4.91	34.50	0.38	27.31	77	1.32
1001	4.11	34.54	0.61	1000	4.10	34.54	0.62	27.43	66	1.48

HORIZON; March 5, 1954; 0901 GCT; 25°34.5'N, 112°18.5'W; sounding, 43 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 11°.

137.23

0	18.51	34.43		0	18.51	34.43		24.73	322	0.00
5	18.52	-		10	18.50	34.43		24.73	322	0.03
10	18.50	-		20	17.47	34.25		24.85	311	0.06
15	18.45	34.42		30	16.02	34.26		25.19	279	0.09
20	17.47	34.25		50	14.92	34.23		25.42	257	0.15
25	17.06	34.29								
35	15.30	34.27								
46	14.96	-								
61	14.89	34.18								

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 \text{cm}^3/\text{g}$	dyn. m

137.40

25° 01.5' 113° 26.5'

HORIZON; March 5, 1954; 0030 GCT; ~~24°40'N~~, ~~114°02'W~~; sounding, 1750 fm; wind, 320°, force 6; weather, partly cloudy; sea, rough; wire angle, 21°.

0	19.7			0	19.7					
10	19.74			10	19.74					
30	19.56			20	19.63					
44	17.89			30	19.56					
54	15.98			50	16.67					
63	14.74			75	13.73					
73	13.96			100	11.60					
82	12.77			150	11.14					
96	11.76			200	10.60					
106	11.42			250	10.01					
129	11.14			300	9.50					
157	11.13			400	8.54					
210	10.49			500	7.33					
272	9.40			600	6.38					
383	8.72									
510	7.22									
646	6.06									

145.160

N. B. SCOFIELD; March 31, 1954; 1738 GCT; 19°53'N, 120°02'W; sounding, 1000 fm; wind, 020°, force 3; weather, cloudy; sea, moderate; wire angle, 15°.

0	19.28	34.27	5.25	0	19.28	34.27	5.25	24.41	353	0.00
10	19.27	34.19	5.09	10	19.27	34.19	5.09	24.35	359	0.04
45	19.09	34.23	5.11	20	19.23	34.20	5.10	24.37	357	0.07
55	18.08	33.93	5.31	30	19.20	34.21	5.10	24.39	355	0.11
60	18.16	33.92	5.27	50	18.78	34.08	5.17	24.39	355	0.18
90	17.46	33.98	5.29	75	17.99	33.95	5.28	24.49	345	0.27
105	16.22	33.87	5.29	100	16.77	33.94	5.29	24.78	318	0.35
115	14.78	33.60	5.19	150	12.52	33.82	3.42	25.59	240	0.49
135	12.94	33.60	4.65	200	11.71	34.52	0.62	26.29	174	0.60
178	11.98	34.30	1.25	250	11.32	34.70	0.15	26.50	154	0.68
236	11.42	34.69	0.20	300	10.68	34.72	0.09	26.63	142	0.76
324	10.24	34.72	0.08	400	9.20	34.58	0.14	26.78	128	0.90
412	9.04	34.57	0.13	500	7.79	34.54	0.11	26.96	110	1.03
509	7.70	34.54	0.10	600	6.68	34.50	0.13	27.09	98	1.14
636	6.35	34.50	0.14	700	5.88	34.50	0.16	27.19	89	1.24
804	5.28	34.52	0.22	800	5.28	34.52	0.23	27.28	80	1.34
985	4.41	34.50	0.39	1000	(4.37)	(34.50)	(0.42)	(27.37)	(72)	(1.51)

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5} \text{cm}^3/\text{g}$	dyn. m

N. B. SCOFIELD; March 27, 1954; 1901, 1730 GCT; 18°25'N, 114°50'W; sounding, 1000 fm; wind, 360°, force 4; weather, cloudy; sea, slight; wire angle, 02°, 08°.

165.105

0	23.62a)	34.58a)	-	0	23.62	34.58	4.33	23.46	444	0.00
10	23.59	34.55	-	10	23.59	34.55	4.55	23.44	445	0.04
21	23.57	34.63	-	20	23.57	34.63	4.57	23.51	439	0.09
31	23.56	34.52	-	30	23.56	34.52	4.58	23.43	446	0.13
42	23.54	34.58	-	50	23.30	34.59	4.60	23.56	434	0.22
52	23.18	34.59	-	75	19.60	34.34	4.40	24.38	356	0.32
62	21.96	34.63	-	100	15.72	34.39	2.58	25.36	262	0.40
73	20.18	-	-	150	13.10	34.77	0.17	26.21	182	0.51
83	17.02	34.22	-	200	12.24	34.85	0.15	26.45	159	0.60
94	15.99	34.48	-	250	11.50	34.83	0.11	26.57	148	0.68
104	15.61	34.27	-	300	10.79	34.80	0.09	26.68	137	0.75
				400	9.50	34.71	0.10	26.83	123	0.89
0	23.60r	34.42r	4.33	500	8.06	34.68	0.07	27.03	104	1.01
10	23.58r	34.46r	4.55	600	6.96	34.68	0.10	27.19	89	1.12
57	22.40r	34.62	4.60	700	6.13	34.66	0.14	27.29	79	1.21
67	21.40r	34.34	4.63	800	5.55	34.64	0.11	27.35	74	1.30
77	19.64r	34.23	4.07	1000	4.54	34.60	0.29	27.43	66	1.46
87	17.03r	34.33	2.94							
108	15.76r	34.29	2.31							
129	13.64	34.65	0.40							
165	12.80	34.81	0.14							
216	12.01	34.86	0.15							
268	11.25	34.81	0.09							
338	10.26	34.78	0.09							
424	9.14	34.69	0.09							
528	7.72	34.68	0.04							
658	6.48	34.67	0.16							
830	5.40	34.63	0.11							
1014	4.49	34.60	0.31							

a) Interpolated temperature and salinity values from the surface through 100 meters were obtained from first cast; all other interpolated values, from second cast.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
77.50-C	III-9	1843	35°03.5'	120°52.5'	94	220°	2	drizzle	rough	13.35	33.38
80.51-C	9	1435	34°27.5'	120°32.5'	40	030°	1	drizzle	smooth	12.57	33.39
80.60-C	9	0945	34°10.0'	121°09.0'	1250	190°	3	fog	slight	13.25	33.30
80.80-C	9	0104	33°29.0'	122°32.0'	2750	200°	3	overcast	moderate	13.64	33.17
83.40-C	7	1535	34°14.0'	119°22.0'	17	090°	3	fog	slight	13.73	33.32
83.48-C	8	0146	33°58.5'	119°57.5'	80	340°	3	cloudy	slight	13.11	33.39
83.55-C	8	0558	33°44.0'	120°24.5'	530	320°	4	clear	slight	13.66	33.24
85.40-C	7	1225	33°57.0'	119°10.5'	400	020°	2	clear	smooth	13.85	33.30
85.50-C	7	0730	33°37.0'	119°52.5'	200	300°	5	clear	rough	13.80	33.25
85.60-C	7	0012	33°18.5'	120°39.0'	1150	320°	4	overcast	rough	13.97	33.07
87.35-C	6	0748	33°49.5'	118°38.5'	400	240°	1	missing	slight	14.52	33.28
87.45-C	6	1326	33°30.0'	119°19.0'	970	320°	2	missing	slight	14.10	33.32
87.55-C	6	1840	33°10.0'	120°00.5'	400	320°	3	cloudy	rough	13.63	33.21
90.30-C	10	1510	33°24.5'	117°55.0'	340	300°	3	overcast	moderate	14.81	33.34
90.45-C	10	2230	32°56.5'	118°54.5'	950	280°	5	partly cloudy	very rough	14.84	33.39
90.60-C	11	0750	32°25.0'	119°57.5'	500	320°	6	partly cloudy	high	14.00	33.25
93.27-C	12	1758	32°56.0'	117°19.0'	55	220°	1	partly cloudy	rough	13.30	33.34
93.40-C	12	0935	32°26.5'	118°11.0'	410	300°	6	missing	very high	14.48	33.35

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
97.30-H	III-19	0240	32°15.5'	117°09.0'	30	300°	3	cloudy	moderate	14.03	33.40
97.32-H	19	0135	32°11.5'	117°17.0'	800	310°	3	cloudy	moderate	13.94	33.40
97.50-H	18	1656	31°37.0'	118°30.0'	1350	310°	3	cloudy	moderate	14.38	33.36
97.70-H	18	0750	30°55.0'	119°55.5'	1950	300°	3	partly cloudy	rough	14.33	33.40
100.30-H	16	1504	31°40.5'	116°46.5'	230	310°	1	partly cloudy	slight	13.87	33.45
100.35-H	16	1705	31°32.0'	117°04.5'	700	200°	2	cloudy	slight	14.91	33.45
100.40-H	16	1928	31°19.5'	117°29.0'	1050	200°	4	cloudy	slight	15.08	33.44
100.45-H	16	2126	31°12.0'	117°46.0'	1050	220°	4	cloudy	moderate	15.04	33.41
100.55-H	17	0305	30°53.0'	118°26.0'	1100	210°	6	partly cloudy	moderate	14.68	33.55
100.60-H	17	0555	30°41.0'	118°48.0'	1650	210°	6	cloudy	moderate	14.55	33.49
100.80-H	17	1630	30°01.0'	120°08.0'	2250	330°	5	cloudy	very rough	15.24	33.35
103.35-H	16	0720	30°59.5'	116°40.5'	1050	310°	3	clear	slight	15.33	33.39
103.45-H	16	0153	30°39.0'	117°29.5'	1200	290°	4	clear	slight	15.27	33.33
103.50-H	15	2334	30°26.0'	117°48.0'	1550	290°	3	partly cloudy	slight	15.53	33.30
103.55-H	15	2114	30°16.0'	118°08.5'	1300	340°	3	clear	slight	15.48	33.34
107.32-H	14	2300	30°25.5'	116°10.5'	172	150°	3	cloudy	rough	14.52	33.32
107.40-H	15	0432	30°10.0'	116°43.5'	1575	340°	4	cloudy	slight	15.72	33.40
107.45-H	15	0700	30°00.0'	117°04.0'	1000	290°	2	partly cloudy	slight	15.46	33.37

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
107.55-H	III-15	1230	29°41.0'	117°41.0'	1800	330°	5	partly cloudy	moderate	14.98	33.37
107.60-H	15	1400	29°29.0'	118°05.5'	1800	300°	3	partly cloudy	moderate	15.21	33.39
110.35-H	14	1653	29°43.0'	115°59.5'	1000	090°	3	partly cloudy	slight	12.14	33.35
110.45-H	14	0915	29°20.0'	116°40.0'	1550	330°	4	partly cloudy	very rough	15.50	33.30
110.50-H	14	0700	29°10.5'	117°01.0'	2000	330°	4	partly cloudy	rough	15.61	33.39
110.55-H	14	0430	29°00.0'	117°19.0'	1950	330°	4	partly cloudy	rough	15.82	33.39
110.70-H	13	2000	28°25.5'	118°18.0'	1950	360°	1	partly cloudy	rough	15.16	33.26
113.30-H	12	1018	29°22.5'	115°17.5'	39	330°	6	missing	very rough	12.10	33.63
113.32 ⁵ -H	12	1139	29°17.0'	115°28.5'	63	310°	6	missing	very rough	12.96	33.55
113.37 ⁵ -H	12	1629	29°05.5'	115°48.0'	1950	310°	5	partly cloudy	very rough	15.29	33.39
113.40-H	12	1800	29°01.0'	115°57.5'	1500	340°	5	cloudy	very rough	15.68	33.39
113.42 ⁵ -H	12	1910	28°56.0'	116°07.5'	600	340°	5	cloudy	very rough	15.74	33.35
113.45-H	12	2030	28°51.0'	116°17.5'	1300	310°	5	cloudy	very rough	15.83	33.39
113.47 ⁵ -H	12	2215	28°47.5'	116°28.0'	2250	310°	4	cloudy	very rough	15.92	33.35
113.55-H	13	0315	28°35.5'	116°58.5'	1900	310°	5	partly cloudy	very rough	15.44	33.29
113.60-H	13	0539	28°25.0'	117°18.0'	2000	310°	3	partly cloudy	very rough	15.38	33.31
117.32 ⁵ -H	11	2235	28°42.5'	115°05.5'	80	310°	7	cloudy	very rough	13.38	33.31
117.35-H	11	2100	28°38.0'	115°16.0'	125	310°	6	partly cloudy	very rough	14.14	33.30

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
117.37 ⁵ -H	III-11	1920	28°33.0'	115°36.0'	295	310°	6	partly cloudy	high	14.06	33.33
117.42 ⁵ -H	11	1539	28°23.0'	115°47.5'	700	310°	6	cloudy	very rough	15.28	33.40
117.45-H	11	1354	28°22.5'	115°57.5'	1730	310°	6	cloudy	very rough	15.56	33.40
117.47 ⁵ -H	11	1200	28°16.0'	116°07.5'	2580	310°	6	overcast	rough	15.53	33.37
117.50-H	11	1030	28°11.0'	116°16.5'	2250	310°	6	overcast	rough	15.60	33.35
117.55-H	11	0545	27°59.0'	116°35.5'	1900	310°	6	overcast	rough	15.87	33.35
120.27 ⁵ -H	9	0352	28°18.0'	114°24.0'	53	340°	4	missing	moderate	15.41	33.54
120.30-H	9	0500	28°12.0'	114°34.5'	55	340°	4	fog	moderate	15.66	33.56
120.32 ⁵ -H	9	0607	28°07.0'	114°43.5'	50	310°	3	fog	moderate	15.82	33.63
120.37 ⁵ -H	9	0930	27°59.5'	115°05.0'	38	310°	2	clear	slight	15.74	33.51
120.40-H	9	1040	27°56.0'	115°15.0'	29	270°	6	clear	rough	16.18	33.63
120.42 ⁵ -H	9	1150	27°50.5'	115°29.5'	105	310°	4	fog	moderate	15.42	33.53
120.45-H	9	1340	27°40.5'	115°38.5'	1500	320°	4	overcast	moderate	15.46	33.53
120.47 ⁵ -H	9	1530	27°35.0'	115°48.0'	2500	320°	4	partly cloudy	moderate	15.16	33.40
120.55-H	9	1958	27°22.5'	116°10.5'	2100	310°	2	partly cloudy	moderate	16.41	33.62
120.60-H	9	2229	27°13.0'	116°31.5'	2100	340°	4	cloudy	moderate	16.16	33.55
120.80-H	10	0750	26°32.5'	117°48.5'	2200	300°	6	partly cloudy	rough	17.89	34.04
123.37-H	8	1630	27°24.0'	114°39.5'	40	300°	3	clear	slight	14.37	33.85

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
123.42 ⁵ -H	III-8	1140	27°09.0'	115°12.5'	2350	340°	4	partly cloudy	moderate	16.16	33.57
123.45-H	8	0955	27°05.0'	115°20.5'	2100	340°	4	partly cloudy	moderate	16.58	33.81
123.47 ⁵ -H	8	0822	27°00.5'	115°28.5'	2100	340°	4	missing	moderate	16.60	33.84
123.50-H	8	0718	26°56.5'	115°34.5'	1850	360°	4	missing	moderate	16.54	33.74
123.55-H	8	0440	26°48.5'	115°51.5'	2150	360°	5	missing	moderate	16.73	33.88
127.37-H	7	0746	26°48.5'	114°17.5'	1515	020°	5	missing	moderate	17.52	34.10
127.40-H	7	0926	26°42.0'	114°29.5'	1900	340°	6	missing	rough	18.32	34.22
127.42 ⁵ -H	7	1049	26°35.0'	114°36.0'	2250	300°	5	missing	rough	18.33	34.25
127.45-H	7	1215	26°28.5'	114°51.0'	2100	280°	5	missing	very rough	18.48	33.78
127.47 ⁵ -H	7	1330	26°29.0'	115°02.5'	1900	270°	5	cloudy	very rough	18.33	34.22
127.55-H	7	1815	26.12.5'	115°27.0'	2005	330°	5	cloudy	rough	18.89	34.27
127.60-H	7	2045	26°04.0'	115°45.0'	2175	300°	6	partly cloudy	rough	18.30	34.22
130.35-H	6	2200	26° ¹⁹ 14.0'	113° ^{48.5} 38.5'	250	280°	5	partly cloudy	rough	17.81	34.07
130.45-H	6	1629	25° ^{59.5} 56.5'	114° ²⁷ 57.0'	1950	310°	4	partly cloudy	rough	18.32	34.20
130.50-H	6	1337	25°45.5'	114°50.5'	2000	310°	4	overcast	rough	18.95	34.23
130.55-H	6	1120	25°35.0'	115°09.0'	2100	320°	4	missing	rough	18.88	34.29
133.25-H	5	1356	26°03.0'	112°55.0'	50	320°	5	partly cloudy	rough	17.22	34.27
133.35-H	5	1840	25°44.0'	113°26.5'	470	310°	5	partly cloudy	high	19.20	34.27

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
133.40-H	III-5	2030	25°35.0'	113°45.5'	615	330°	4	partly cloudy	high	19.18	34.27
133.45-H	5	2315	25° ^{24.5} 34.5 '	114°04.5'	1900	330°	5	partly cloudy	high	19.30	34.31
137.30-H	5	0607	25°20.0'	112°45.5'	200	300°	4	clear	moderate	18.00	34.11
137.35-H	5	0340	25°12.0'	113°05.5'	625	320°	5	clear	rough	19.09	34.28
137.45-H	4	2203	24°50.0'	113°45.0'	1810	320°	4	partly cloudy	moderate	19.41	34.33
137.50-H	4	2000	24°40.0'	114°02.0'	1950	320°	4	partly cloudy	moderate	19.14	34.33

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

SIO
CCOFI
5403

Director of Research
Fish Commission of Oregon
Route 1, Box 31A
Clackamas, Oregon

Mr. Jeffery D. Frautschy
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. Seth Gordon, Director
California Department of Fish and Game
926 J Street
Sacramento 14, California

Mr. John Hawk
c/o Seafarers' International Union
of North America
450 Harrison Street
San Francisco 5, California

Mr. T. Hirano
Tokai Regional Fisheries Research
Laboratory
Tsukishima
Tokyo, Japan

Mr. John D. Isaacs
Program Director, Marine Life Research
University of California
Scripps Institution of Oceanography
La Jolla, California

Japan Meteorological Agency
Oceanographical Section
Tokyo, Japan

Dr. H. Kitamura
Oceanographic Section
Kobe Marine Observatory
Kobe, Japan

Dr. Richard H. Fleming
University of Washington
Oceanographic Laboratories
Seattle 5, Washington

Dr. Paul M. Fye
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Hancock Library of Biology and
Oceanography
Allan Hancock Foundation
University of Southern California
Los Angeles 7, California

Dr. Robert W. Hiatt
University of Hawaii
Honolulu, T. H.

Director
Instituto de Geofísica
Torre de Ciencias, 3er piso
Universidad Nacional Autónoma de
México
Villa Obregon, D. F.
Mexico

Mr. Milton C. James
Pacific Marine Fishery Commission
340 State Office Building
1400 S. W. Fifth Avenue
Portland 1, Oregon

Dr. Martin W. Johnson
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. Hans T. Klein
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. E. Koto
Institute of Fisheries
Hokkaido University
Hakodate, Japan

Mr. Joseph Mardesich
Franco-Italian Packing Company
Fish Harbor Wharf
Terminal Island, California

Dr. J. L. McHugh
Virginia Fisheries Laboratory
Gloucester Point, Virginia

Mr. Arthur H. Mendonca
c/o R. E. Booth Company, Inc.
280 Battery Street
San Francisco 11, California

Mr. John V. Morris
French Sardine Company
582 Tuna Street
Terminal Island, California

Dr. A. W. H. Needler, Director
Pacific Biological Station
Nanaimo, B. C.
Canada

Director
Norwegian Polar Institute
Observatoriegat 1
Oslo, Norway

Dr. Yngve H. Olsen
Journal of Marine Research
Yale University
New Haven, Connecticut

Librarian
Pacific Oceanic Fishery Investigations
P. O. Box 3830
Honolulu 12, T. H.

Dr. E. C. LaFond
Code 2235
U. S. Navy Electronics Laboratory
San Diego 52, California

Mr. J. C. Marr
U. S. Bureau of Commercial Fisheries
c/o Scripps Institution of Oceanography
La Jolla, California

Dr. H. J. McLellan
Atlantic Oceanographic Group
St. Andrews, New Brunswick
Canada

Dr. R. C. Miller, Director
California Academy of Science
Golden Gate Park
San Francisco 18, California

National Marine Consultants, Inc.
Administration Airport
Goleta, California
Attn: Dr. R. Kent

Mr. Kenneth S. Norris, Curator
Marineland of the Pacific
Portuguese Bend
Marineland, California

Pusan Fisheries College
Pusan
Korea

Chief of Naval Research
Office of Naval Research
Geophysics Branch
Washington 25, D. C.

Dr. E. L. Pickard
Institute of Oceanography
University of British Columbia
Vancouver, B. C.
Canada

Mr. Don Powell
U. S. Bureau of Commercial Fisheries
2725 Montlake Boulevard
Seattle 2, Washington

Mr. John Radovich
California Department of Fish and Game
California State Fisheries Laboratory
Terminal Island, California

Dr. Roger Revelle
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Gordon A. Riley
Bingham Oceanographic Foundation
Yale University
New Haven, Connecticut

Mr. Gunnar I. Roden
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. M. B. Schaefer
Inter-American Tropical Tuna
Commission
c/o Scripps Institution of Oceanography
La Jolla, California

Dr. O. E. Sette, Chief
Ocean Research
U. S. Bureau of Commercial Fisheries
450-B Jordan Hall
Stanford, California

Mr. W. E. Stewart
c/o California State Chamber of
Commerce
350 Bush Street
San Francisco 4, California

Dr. D. W. Pritchard, Director
Chesapeake Bay Institute
The Johns Hopkins University
121 Maryland Hall
Baltimore 18, Maryland

Mr. Joseph L. Reid, Jr.
University of California
Scripps Institution of Oceanography
La Jolla, California

Mrs. Margaret K. Riedel
University of California
Scripps Institution of Oceanography
La Jolla, California

Mrs. Margaret K. Robinson
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. Don T. Saxby
California Division
California Packing Corporation
2600 Seventh Street
Berkeley 10, California

Mr. Richard A. Schwartzlose
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. D. Shoji
Japanese Hydrographic Office
Tsukiji
Tokyo, Japan

Miss Margaret Storey, Librarian
Natural History Museum
Stanford, California

Dr. Y. Takenouti
Oceanographical Section
Japanese Meteorological Agency
Chuo-ku
Tokyo, Japan

Department of Oceanography
Texas A. and M. College
College Station, Texas

Dr. M. Uda
Tokyo University of Fisheries
Minato-ku
Tokyo, Japan

Library (2)
U. S. Navy Electronics Laboratory
San Diego, 52, California

Library (4)
University of California
Scripps Institution of Oceanography
La Jolla, California

University of California
Serials Department
General Library
Berkeley 4, California

Librarian
University of Washington
Oceanographic Laboratories
Friday Harbor, Washington

Director
University of Washington
School of Fisheries
Seattle 4, Washington

Chief
Division of Biological Research
Bureau of Commercial Fisheries
U. S. Fish and Wildlife Service
Washington 25, D. C.

Dr. John P. Tully
Pacific Oceanographic Group
P. O. Drawer 6
Nanaimo, B. C.
Canada

U. S. Hydrographic Office
Navy Department
Washington 25, D. C.
Attn: Dr. John Lyman

University of California
Department of Zoology
Berkeley 4, California

Library
University of California
Scripps Institution of Oceanography
Scripps Field Annex
La Jolla, California

Director
University of Miami
Marine Laboratory
Coral Gables, Florida

Librarian (2)
University of Washington
Oceanographic Laboratories
Seattle 5, Washington

Mr. Gilbert C. Van Camp, Sr.
772 Tuna Street
Terminal Island, California

Mr. Richard C. Vetter
Secretary to the Committee
on Oceanography
National Academy of Sciences
2101 Constitution Avenue
Washington 25, D. C.

Dr. Boyd W. Walker
University of California
Department of Zoology
Los Angeles 24, California

Mr. John G. Wyllie (20)
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Lionel A. Walford, Chief
Atlantic Fishery Oceanographic
Research Center
U. S. Bureau of Commercial Fisheries
734 Jackson Place, N. W.
Washington 25, D. C.

Dr. Warren S. Wooster
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Kozo Yoshida
Geophysical Institute
Tokyo University
Bunkyo-ku
Tokyo, Japan